



# LCD TV OWNER'S MANUAL

19LG30  
19LG31  
22LG30  
22LG31  
22LG30DC  
26LG30  
26LG30DC

Please read this manual carefully before operating your set and retain it for future reference.

Write the model number and serial number from the label on the back cabinet on the front or back of this manual.

P/NO : SAC30708022 (0810-REV06)

# WARNING / CAUTION



**WARNING / CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN



**TO REDUCE THE RISK OF ELECTRIC SHOCK  
DO NOT REMOVE COVER (OR BACK). NO  
USER SERVICEABLE PARTS INSIDE. REFER TO  
QUALIFIED SERVICE PERSONNEL.**



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## WARNING/CAUTION

**TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.**

## NOTE TO CABLE/TV INSTALLER

This reminder is provided to call the CATV system installer’s attention to Article 820-40 of the National Electric Code (U.S.A.). The code provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of the cable entry as practical.

# WARNING / CAUTION

To prevent fire or shock hazards, do not expose this product to rain or moisture.

## FCC NOTICE

### Class B digital device

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.**

## CAUTION

Do not attempt to modify this product in any way without written authorization from LG Electronics. Unauthorized modification could void the user’s authority to operate this product

# SAFETY INSTRUCTIONS

## IMPORTANT SAFETY INSTRUCTIONS

Read these instructions.

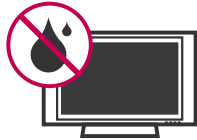
Keep these instructions.

Heed all warnings.

Follow all instructions.



- 1 Do not use this apparatus near water.



- 2 Clean only with dry cloth.



- 3 Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.



- 4 Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



- 5 Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.



- 6 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.



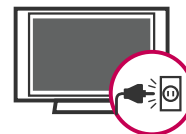
- 7 Only use attachments/accessories specified by the manufacturer.



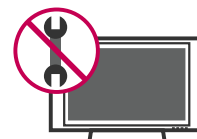
- 8 Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 9 Unplug this apparatus during lightning storms or when unused for long periods of time.



- 10 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



# SAFETY INSTRUCTIONS

- 11** Never touch this apparatus or antenna during a thunder or lightning storm.

- 12** When mounting a TV on the wall, make sure not to install the TV by the hanging power and signal cables on the back of the TV.

- 13** Do not allow an impact shock or any objects to fall into the product, and do not drop onto the screen with something.

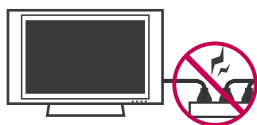
**14** **CAUTION** concerning the Power Cord:

It is recommend that appliances be placed upon a dedicated circuit; that is, a single outlet circuit which powers only that appliance and has no additional outlets or branch circuits. Check the specification page of this owner's manual to be certain.

Do not connect too many appliances to the same AC power outlet as this could result in fire or electric shock.

Do not overload wall outlets. Overloaded wall outlets, loose or damaged wall outlets, extension cords, frayed power cords, or damaged or cracked wire insulation are dangerous. Any of these conditions could result in electric shock or fire. Periodically examine the cord of your appliance, and if its appearance indicates damage or deterioration, unplug it, discontinue use of the appliance, and have the cord replaced with an exact replacement part by an authorized servicer. Protect the power cord from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the appliance.

Do not make the TV with the power cord plugged in. Do not use a damaged or loose power cord. Be sure do grasp the plug when unplugging the power cord. Do not pull on the power cord to unplug the TV.



- 15** **WARNING** - To reduce the risk of fire or electrical shock, do not expose this product to rain, moisture or other liquids. Do not touch the TV with wet hands. Do not install this product near flammable objects such as gasoline or candles or expose the TV to direct air conditioning.



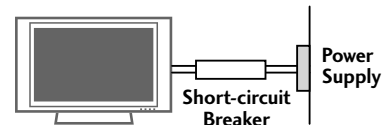
- 16** Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).



**17** **GROUNDING**

Ensure that you connect the earth ground wire to prevent possible electric shock (i.e. a TV with a three-prong grounded AC plug must be connected to a three-prong grounded AC outlet). If grounding methods are not possible, have a qualified electrician install a separate circuit breaker.

Do not try to ground the unit by connecting it to telephone wires, lightning rods, or gas pipes.



- 18** **DISCONNECTING DEVICE FROM MAINS**  
Mains plug is the disconnecting device. The plug must remain readily operable.

- 19** Keep the product away from direct sunlight.

## 20 ANTENNAS

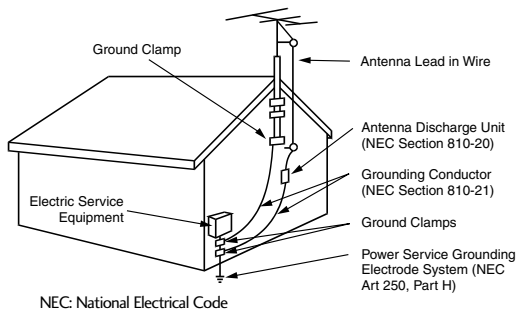
### Outdoor antenna grounding

If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits as death or serious injury can occur.

Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electrical Code (NEC) in the U.S.A. provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.

### Antenna grounding according to the National Electrical Code, ANSI/NFPA 70



## 21 Cleaning

When cleaning, unplug the power cord and scrub gently with a soft cloth to prevent scratching. Do not spray water or other liquids directly on the TV as electric shock may occur. Do not clean with chemicals such as alcohol, thinners or benzene.

## 22 Moving

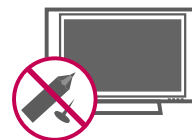
Make sure the product is turned off, unplugged and all cables have been removed. It may take 2 or more people to carry larger TVs. Do not press against or put stress on the front panel of the TV.

## 23 Ventilation

Install your TV where there is proper ventilation. Do not install in a confined space such as a bookcase. Do not cover the product with cloth or other materials (e.g.) plastic while plugged in. Do not install in excessively dusty places.

24 If you smell smoke or other odors coming from the TV or hear strange sounds, unplug the power cord contact an authorized service center.

25 Do not press strongly upon the panel with hand or sharp object such as nail, pencil or pen, or make a scratch on it.



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Dolby Laboratories.

- 
- If the TV feels cold to the touch, there may be a small "flicker" when it is turned on. This is normal, there is nothing wrong with TV.
  - Some minute dot defects may be visible on the screen, appearing as tiny red, green, or blue spots. However, they have no adverse effect on the monitor's performance.
  - Avoid touching the LCD screen or holding your finger(s) against it for long periods of time. Doing so may produce some temporary distortion effects on the screen.

#### **On Disposal (Only Hg lamp used LCD TV)**

The fluorescent lamp used in this product contains a small amount of mercury. Do not dispose of this product with general household waste. Disposal of this product must be carried out in accordance to the regulations of your local authority.

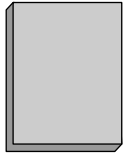


# PREPARATION

## ACCESSORIES

Ensure that the following accessories are included with your TV. If an accessory is missing, please contact the dealer where you purchased the TV.

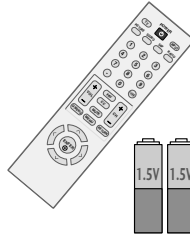
The accessories included may differ from the images below.



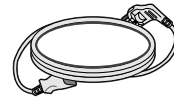
Owner's Manual



CD Manual



Remote Control,  
Batteries

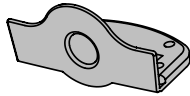


Power Cord

### Only 19/22LG3\*\*

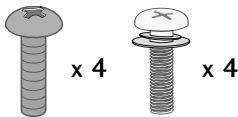


Cable Management Clip

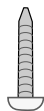


Protection Cover

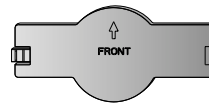
### Only 26LG3\*\*



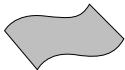
Bolts for stand assembly  
(Refer to P.12)



Screw for stand fixing  
(Refer to P.16)



Protection Cover

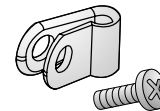


Polishing Cloth

(This feature is not available for all models.)

\* Wipe spots on the exterior only with the polishing cloth.

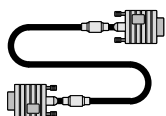
\* Do not wipe roughly when removing stain. Please be cautious of that excessive pressure may cause scratch or discoloration.



Protective Bracket and Bolt for Power Cord

(This feature is not available for all models.)  
(Refer to P.14)

### Option Extras



D-sub 15 pin Cable

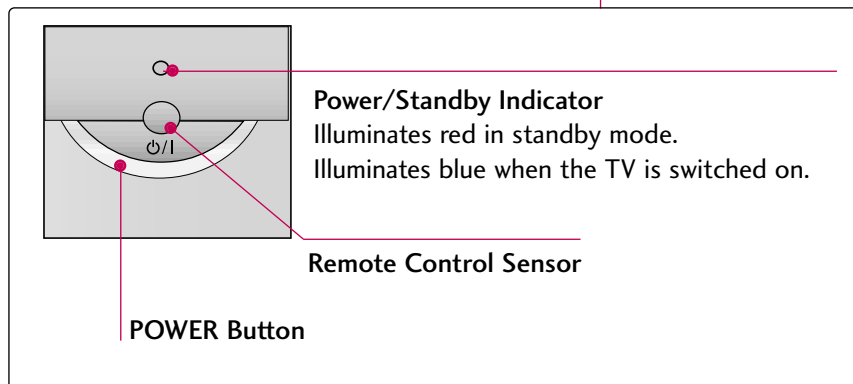
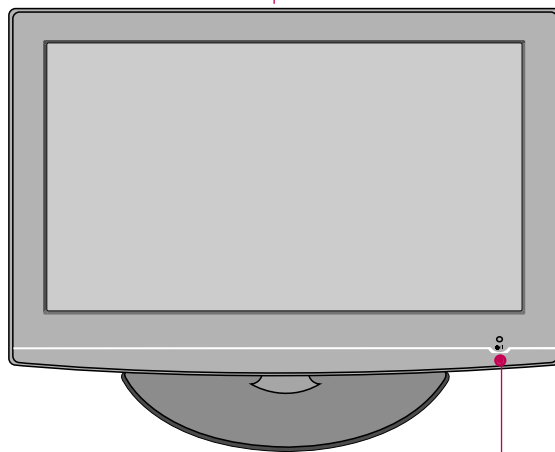
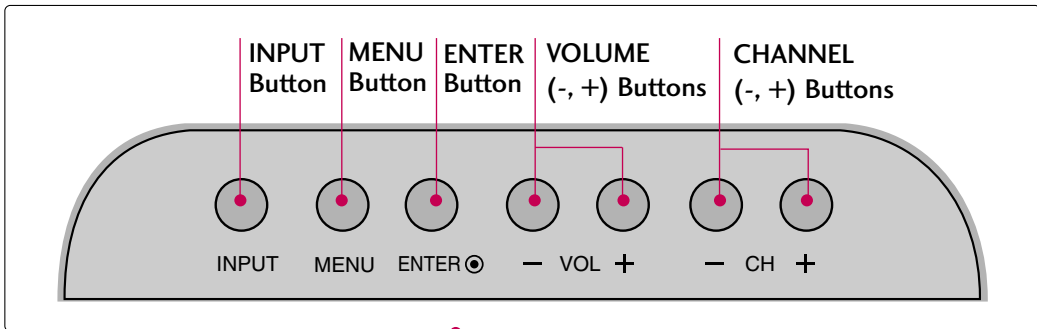
When using the VGA (D-sub 15 pin cable) PC connection, the user must use shielded signal interface cables with ferrite cores to maintain standards compliance.

# PREPARATION

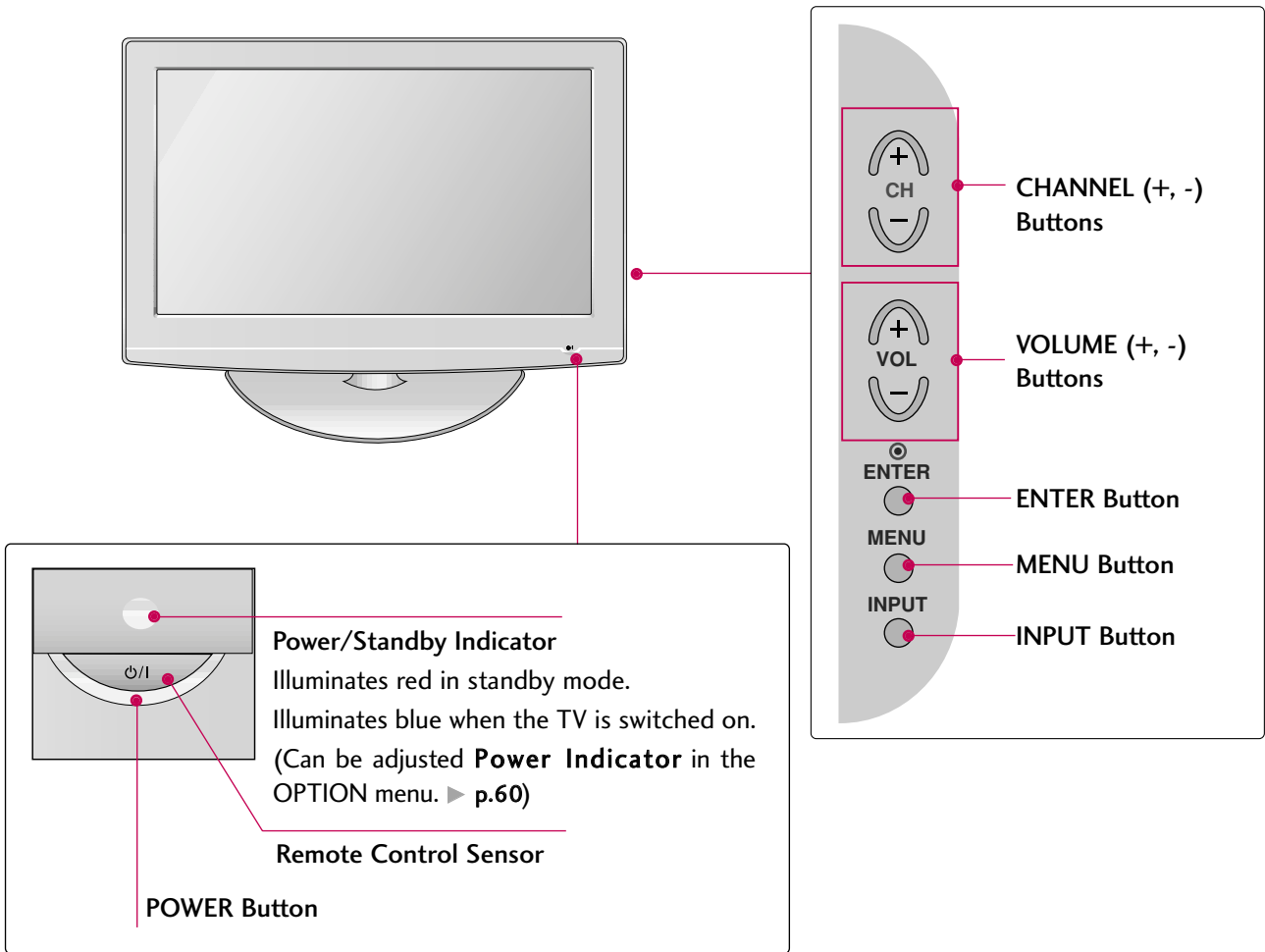
## FRONT PANEL INFORMATION

- Image shown may differ from your TV.
- NOTE:** If your TV has a protection tape attached, remove the tape. And then wipe the TV with a cloth (If a polishing cloth is included with your product, use it).

19/22LG3\*\*



26LG3\*\*

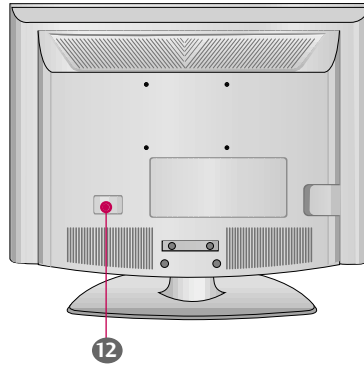


# PREPARATION

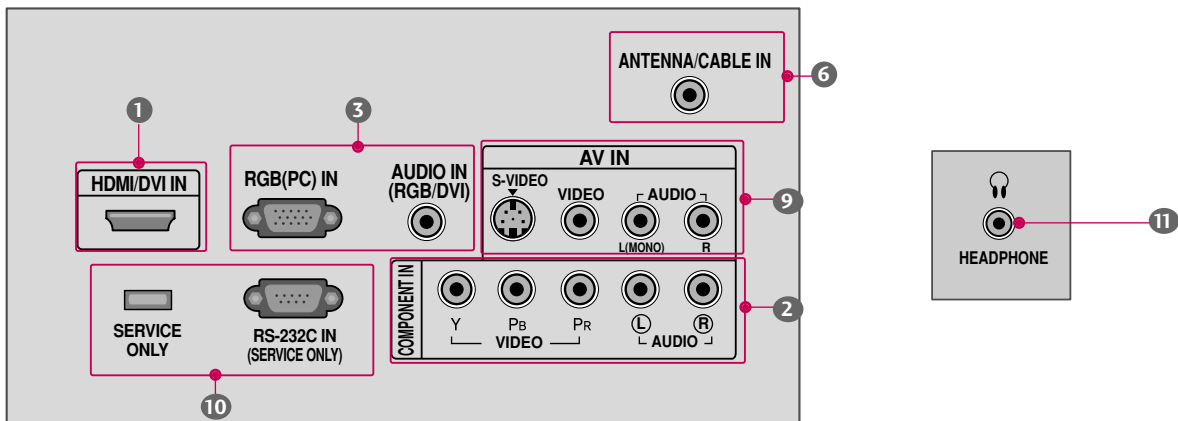
## BACK PANEL INFORMATION

Image shown may differ from your TV.

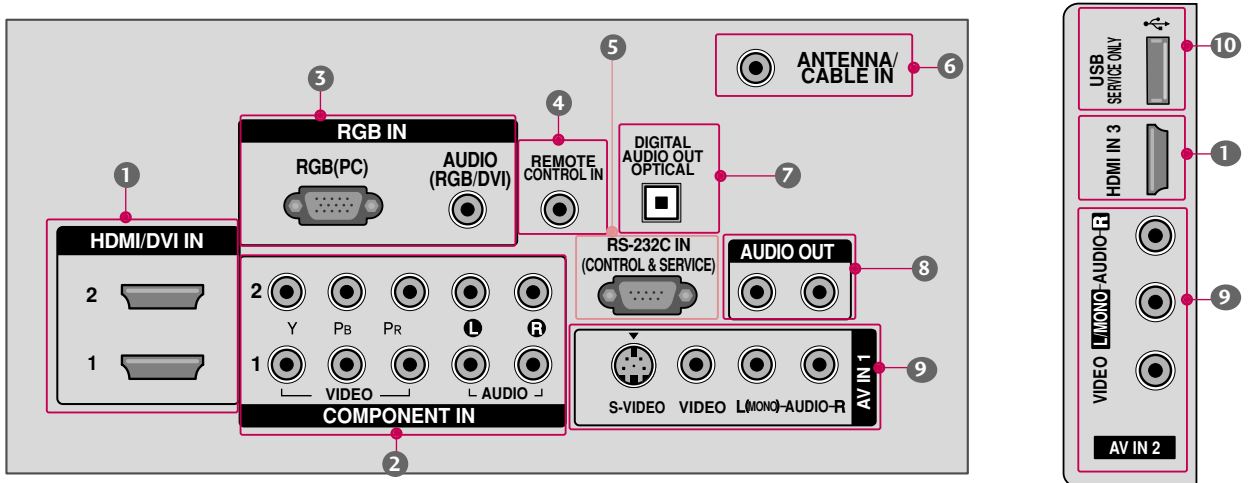
PREPARATION



### 19/22LG3\*\*



### 26LG3\*\*



- 1 **HDMI/DVI IN, HDMI IN**  
Digital Connection.  
Supports HD video and Digital audio. Doesn't support 480i.  
Accepts DVI video using an adapter or HDMI to DVI cable (not included)
- 2 **COMPONENT IN**  
Analog Connection.  
Supports HD.  
Uses a red, green, and blue cable for video & red and white for audio.
- 3 **RGB (PC)**  
Analog PC Connection. Uses a D-sub 15 pin cable (VGA cable).  
**AUDIO (RGB/DVI)**  
1/8" headphone jack for analog PC audio input.
- 4 **REMOTE CONTROL PORT**  
For a wired remote control.
- 5 **RS-232C IN (CONTROL & SERVICE) PORT**  
Used by third party devices.
- 6 **ANTENNA/CABLE IN**  
Connect over-the air signals to this jack.  
Connect cable signals to this jack.
- 7 **DIGITAL AUDIO OUT OPTICAL**  
Digital audio output for use with amps and home theater systems.  
Includes an optical connection.  
Note: In standby mode, these ports do not work.
- 8 **AUDIO OUT**  
Analog audio output for use with amps and home theater systems.
- 9 **AV (Audio/Video) IN**  
Analog composite connection. Supports standard definition video only (480i).  
**S-VIDEO**  
Better quality than standard composition.  
Supports standard definition video only (480i).
- 10 **USB SERVICE ONLY**  
**SERVICE ONLY**  
**RS-232C IN (SERVICE ONLY)**  
Used for software updates.  
*For 22LG30DC: RS-232C IN (SERVICE ONLY)*  
Used by third party devices.
- 11 **Headphone INPUT**  
Plug the headphone into the headphone socket.
- 12 **Power Cord Socket**  
For operation with AC power.  
Caution: Never attempt to operate the TV on DC power.

# PREPARATION

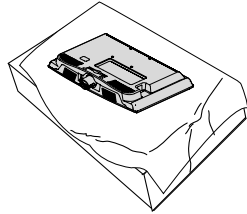
## STAND INSTRUCTION

▪ Image shown may differ from your TV

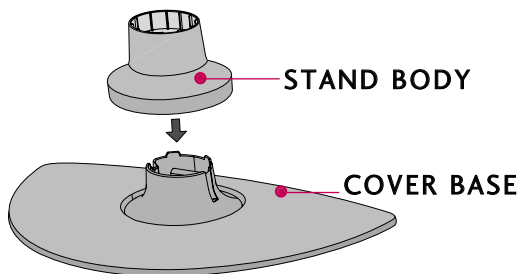
For 19/22LG3\*\*

### INSTALLATION

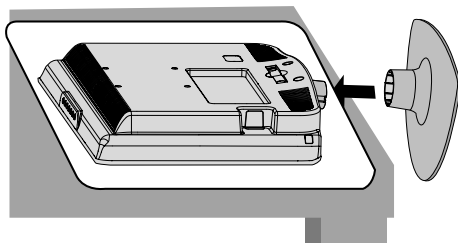
- 1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



- 2 Assemble the parts of the **STAND BODY** with **COVER BASE** of the TV. Insert the **STAND BODY** into a **COVER BASE** until clicking sound.

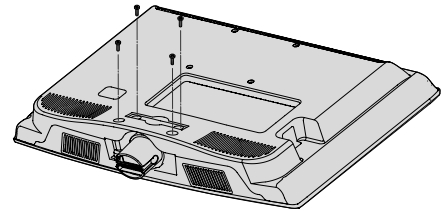


- 3 Assemble the TV as shown.

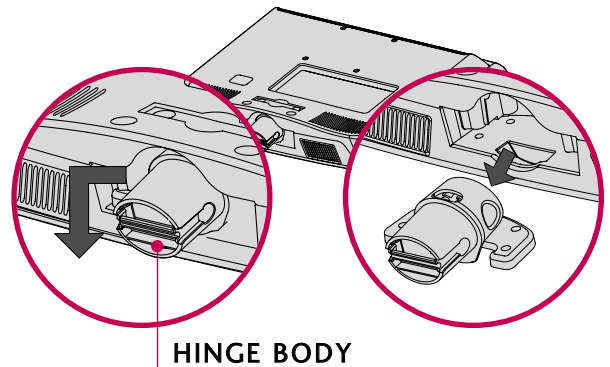


### PROTECTION COVER

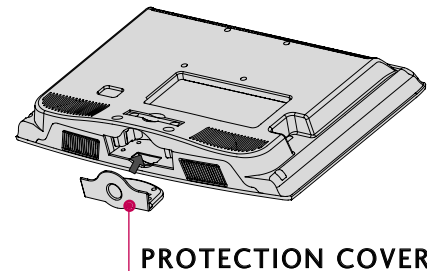
- 1 Loose the bolts from TV.



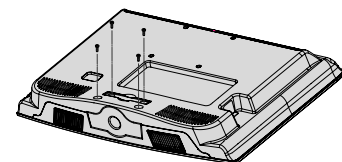
- 2 Bend the **HINGE BODY** and pull it backward.



- 3 Insert the **PROTECTION COVER** into the TV.



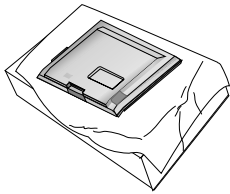
- 4 Fix the 4 bolts securely using the holes in the back of the TV.



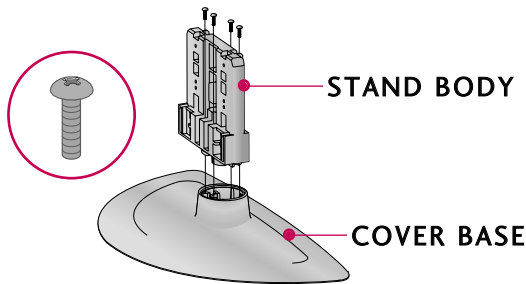
For 26LG3\*\*

## INSTALLATION

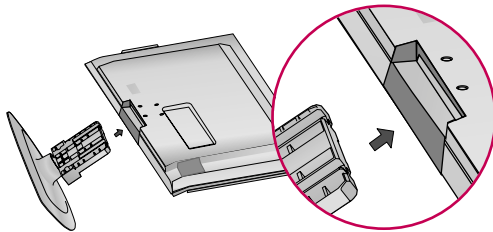
- 1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



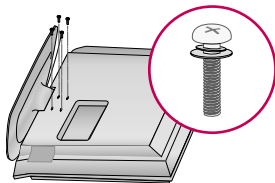
- 2 Assemble the parts of the **STAND BODY** with **COVER BASE** of the TV.



- 3 Assemble the TV as shown.



- 4 Fix the 4 bolts securely using the holes in the back of the TV.

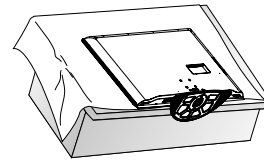


### ! NOTE

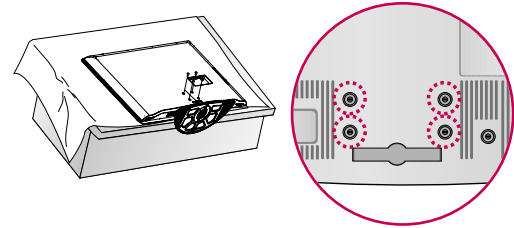
- ▶ When assembling the desk type stand, make sure the bolt is fully tightened. (If not tightened fully, the TV can tilt forward after the product installation). Do not over tighten.

## DETACHMENT

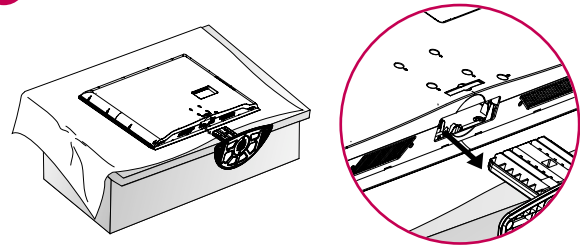
- 1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



- 2 Loosen the bolts from TV.

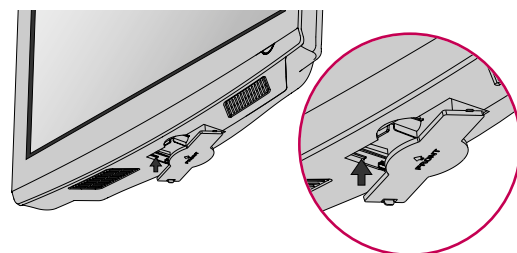


- 3 Detach the stand from TV.



## PROTECTION COVER

After removing the stand, install the included **protection cover** over the hole for the stand. Press the **PROTECTION COVER** into the TV until you hear it click.



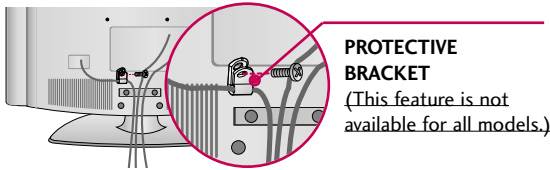
# PREPARATION

## CABLE MANAGEMENT

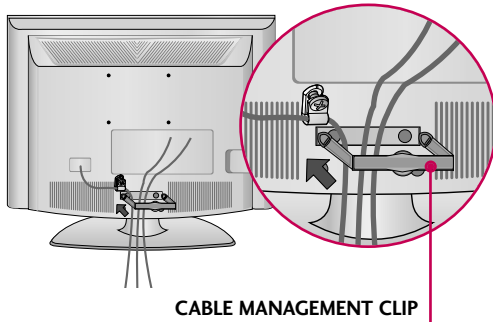
■ Image shown may differ from your TV

For 19/22LG3\*\*

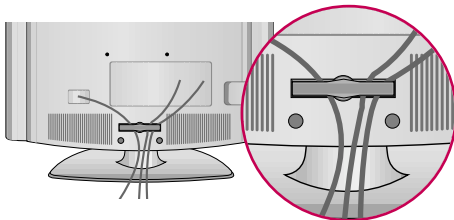
- 1 Connect the cables as necessary.  
To connect additional equipment, see the **EXTERNAL EQUIPMENT SETUP** section.  
Secure the power cable with the **PROTECTIVE BRACKET** and the screw as shown. It will help prevent the power cable from being removed by accident.



- 2 Install the **CABLE MANAGEMENT CLIP** as shown.

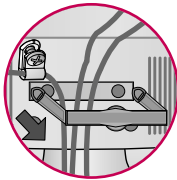


- 3 Fit the **CABLE MANAGEMENT CLIP** as shown.



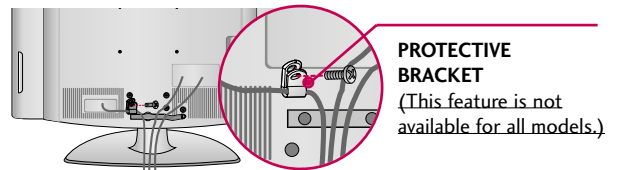
### How to remove the CABLE MANAGEMENT CLIP

- ▶ Hold the **CABLE MANAGEMENT CLIP** with both hands and pull it backward.

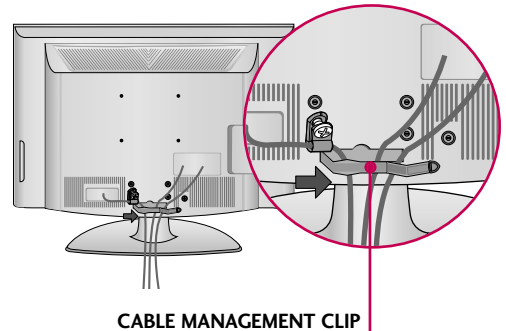


For 26LG3\*\*

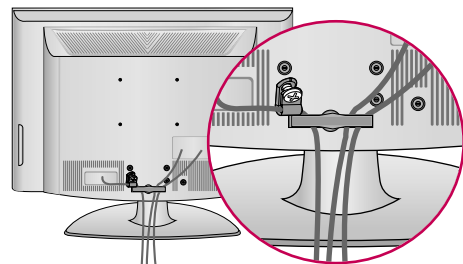
- 1 Connect the cables as necessary.  
To connect additional equipment, see the **EXTERNAL EQUIPMENT SETUP** section.  
Secure the power cable with the **PROTECTIVE BRACKET** and the screw as shown. It will help prevent the power cable from being removed by accident.



- 2 Install the **CABLE MANAGEMENT CLIP** as shown.



- 3 Put the cables inside the **CABLE MANAGEMENT CLIP** and snap it closed.



### NOTE

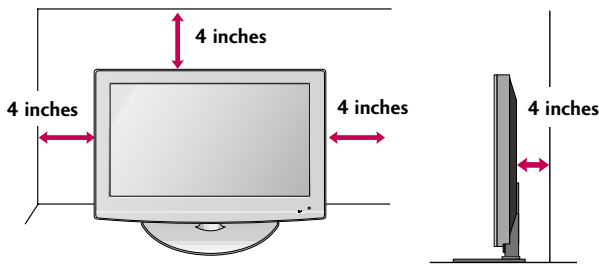
- ▶ Do not hold the **CABLE MANAGEMENT CLIP** when moving the TV.  
- If the TV is dropped, you may be injured or the product may be broken.



## DESKTOP PEDESTAL INSTALLATION

- Image shown may differ from your TV.

For proper ventilation, allow a clearance of 4 inches on all four sides from the wall.

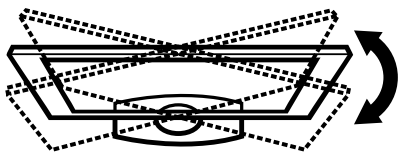


### ⚠ CAUTION

- Ensure adequate ventilation by following the clearance recommendations.

## SWIVEL STAND (Only 26LG3\*\*)

After installing the TV, you can adjust the TV set manually to the left or right direction by 20 degrees to suit your viewing position.



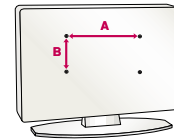
## VESA WALL MOUNTING

Install your wall mount on a solid wall perpendicular to the floor. When attaching to other building materials, please contact your nearest dealer.

If installed on a ceiling or slanted wall, it may fall and result in severe personal injury.

We recommend that you use an LG brand wall mount when mounting the TV to a wall.

LG recommends that wall mounting be performed by a qualified professional installer.



Model	VESA (A * B)	Standard Screw	Quantity
19LG3** 22LG3**	100 * 100	M4	4
26LG3**	200 * 100	M4	4

### ! NOTE

- Screw length needed depends on the wall mount used. For further information, refer to the instructions included with the mount.
- Standard dimensions for wall mount kits are shown in the table.
- When purchasing our wall mount kit, a detailed installation manual and all parts necessary for assembly are provided.
- Do not use screws longer than the standard dimension, as they may cause damage to the inside to the TV.
- For wall mounts that do not comply with the VESA standard screw specifications, the length of the screws may differ depending on their specifications.
- Do not use screws that do not comply with the VESA standard screw specifications.  
Do not use fasten the screws too strongly, this may damage the TV or cause the TV to a fall, leading to personal injury. LG is not liable for these kinds of accidents.
- LG is not liable for TV damage or personal injury when a non-VESA or non specified wall mount is used or the consumer fails to follow the TV installation instructions.

### ⚠ CAUTION

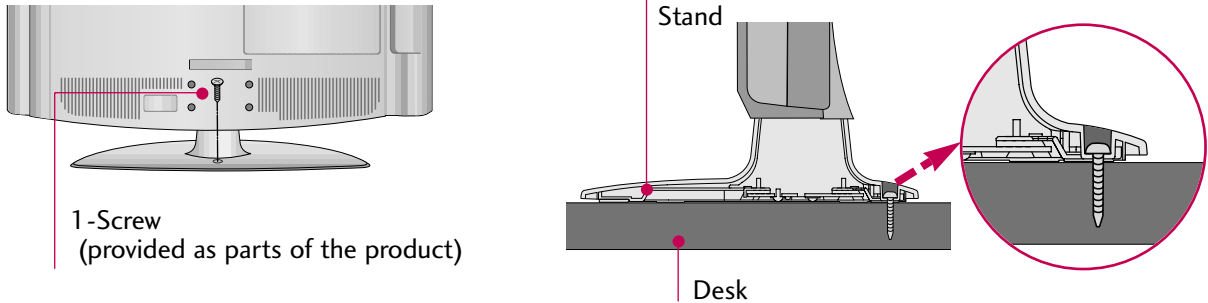
- Do not install your wall mount kit while your TV is turned on. It may result in personal injury due to electric shock.

# PREPARATION

PREPARATION

## ATTACHING THE TV TO A DESK (Only 26LG3\*\*)

The TV must be attached to a desk so it cannot be pulled in a forward/backward direction, potentially causing injury or damaging the product.

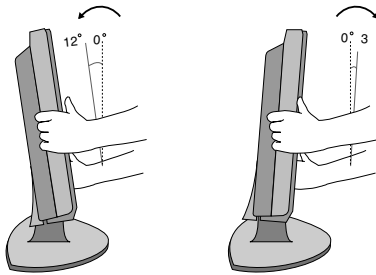


### ⚠ WARNING

- ▶ To prevent TV from falling over, the TV should be securely attached to the floor/wall per installation instructions. Tipping, shaking, or rocking the machine may cause injury.

## POSITIONING YOUR DISPLAY (Only 19/22LG3\*\*)

- Here shown may be somewhat different from your TV.
- Adjust the position of the panel in various ways for maximum comfort.
- Tilt range

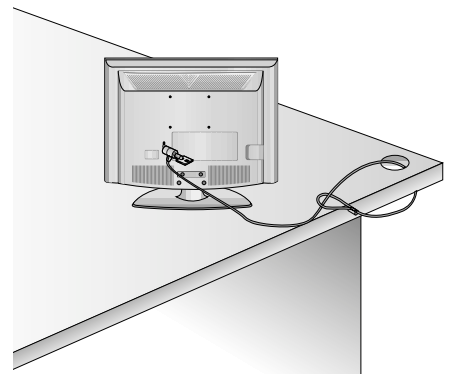


## KENSINGTON SECURITY SYSTEM (Only 19/22LG3\*\*)

- The TV is equipped with a Kensington Security System connector on the back panel. Connect the Kensington Security System cable as shown below.
- For the detailed installation and use of the Kensington Security System, refer to the user's guide provided with the Kensington Security System.

For further information, contact <http://www.kensington.com>, the internet homepage of the Kensington company. Kensington sells security systems for expensive electronic equipment such as notebook PCs and LCD projectors.

NOTE: The Kensington Security System is an optional accessory.



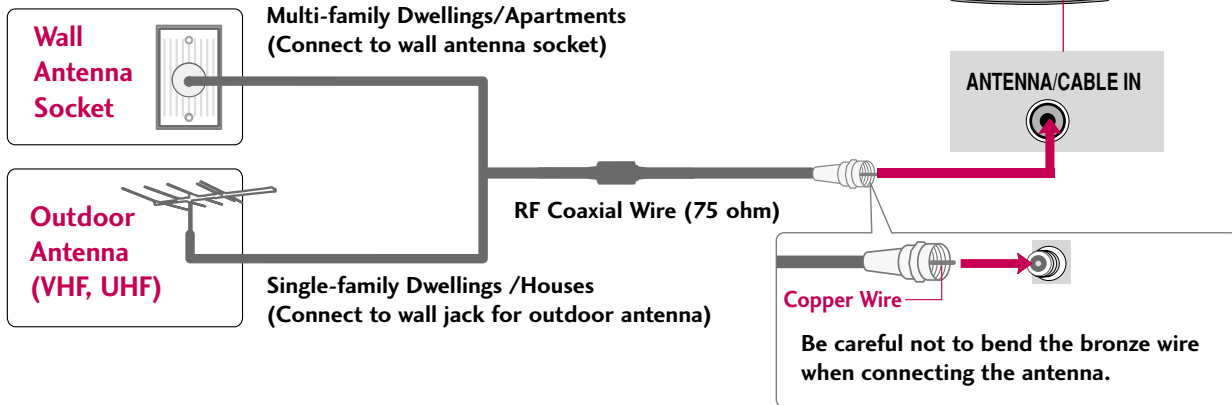
- To prevent damage do not connect to the power outlet until all connections are made between the devices.
- Image shown may differ from your TV.

## ANTENNA OR CABLE CONNECTION

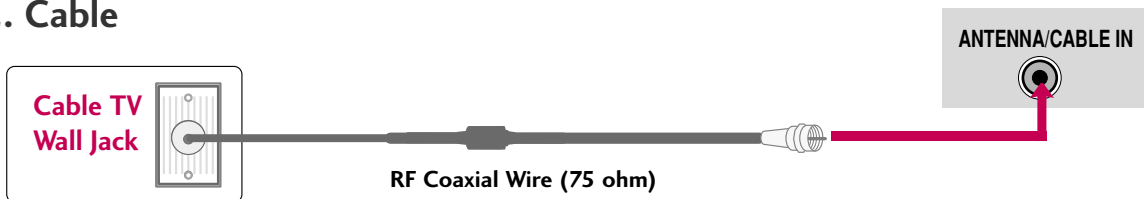
### 1. Antenna (Analog or Digital)

Wall Antenna Socket or Outdoor Antenna without a Cable Box Connections.

For optimum picture quality, adjust antenna direction if needed.



### 2. Cable



- To improve the picture quality in a poor signal area, please purchase a signal amplifier and install properly.
- If the antenna needs to be split for two TV's, install a 2-Way Signal Splitter.
- If the antenna is not installed properly, contact your dealer for assistance.

# EXTERNAL EQUIPMENT SETUP

- To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.

## HD RECEIVER SETUP

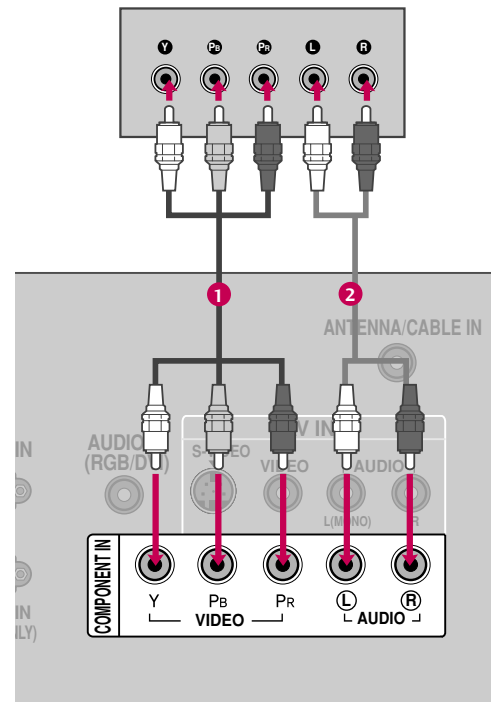
This TV can receive Digital Over-the-air/Cable signals without an external digital set-top box. However, if you do receive digital signals from a digital set-top box or other digital external device, refer to the figure as shown below.

### Component Connection

19/22LG3\*\*

#### 1. How to connect

- 1 Connect the video outputs (Y, PB, PR) of the digital set-top box to the **COMPONENT IN VIDEO** jacks on the TV. Match the jack colors (Y = green, PB = blue, and PR = red).
- 2 Connect the audio output of the digital set-top box to the **COMPONENT IN AUDIO** jacks on the TV.



#### 2. How to use

- Turn on the digital set-top box.  
(Refer to the owner's manual for the digital set-top box operation)
- Select the **Component** input source on the TV using the **INPUT** button on the remote control.

#### Supported Resolutions

Signal	Component	HDMI
480i	Yes	No
480p	Yes	Yes
720p	Yes	Yes
1080i	Yes	Yes
1080p	Yes	Yes

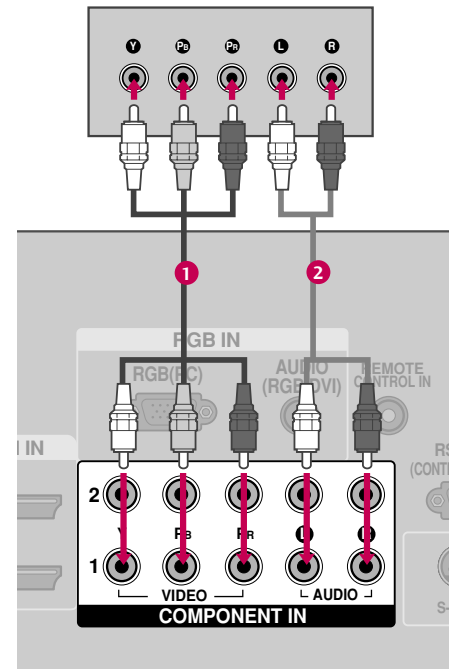
#### Y, CB/PB, CR/PR

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480i	15.73	59.94
	15.73	60.00
720x480p	31.47	59.94
	31.50	60.00
1280x720p	44.96	59.94
	45.00	60.00
1920x1080i	33.72	59.94
	33.75	60.00
1920x1080p	27.00	24.00
	33.75	30.00
	67.43	59.94
	67.50	60.00

26LG3\*\*

## 1. How to connect

- 1 Connect the video outputs (Y, PB, PR) of the digital set-top box to the **COMPONENT IN VIDEO 1** jacks on the TV. Match the jack colors (Y = green, PB = blue, and PR = red).
- 2 Connect the audio output of the digital set-top box to the **COMPONENT IN AUDIO 1** jacks on the TV.



## 2. How to use

- Turn on the digital set-top box.  
(Refer to the owner's manual for the digital set-top box operation)
- Select the **Component 1** input source on the TV using the **INPUT** button on the remote control.
- If connected to **COMPONENT IN2** input, select the **Component 2** input source on the TV.

### Supported Resolutions

Signal	Component	HDMI
480i	Yes	No
480p	Yes	Yes
720p	Yes	Yes
1080i	Yes	Yes
1080p	Yes	Yes

### Y, Cb/Pb, Cr/Pr

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480i	15.73	59.94
	15.73	60.00
720x480p	31.47	59.94
	31.50	60.00
1280x720p	44.96	59.94
	45.00	60.00
1920x1080i	33.72	59.94
	33.75	60.00
1920x1080p	26.97	23.976
	27.00	24.00
	33.71	29.97
	33.75	30.00
	67.432	59.94
	67.50	60.00

# EXTERNAL EQUIPMENT SETUP

## HDMI Connection

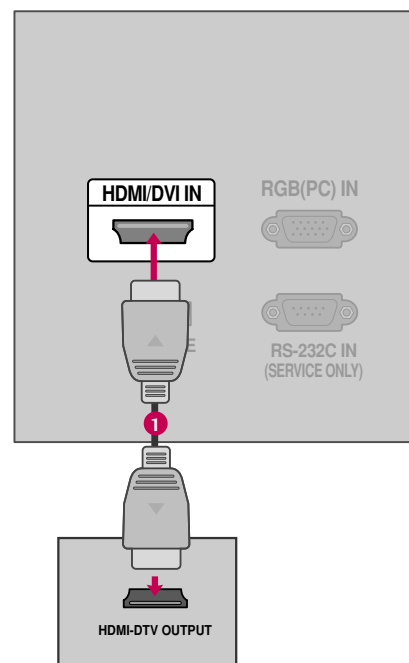
19/22LG3\*\*

### 1. How to connect

- 1 Connect the digital set-top box to **HDMI/DVI IN** jack on the TV.
- 2 No separate audio connection is necessary. HDMI supports both audio and video.

### 2. How to use

- Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
- Select the **HDMI** input source on the TV using the **INPUT** button on the remote control.



### HDMI-DTV

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480p	31.47	59.94
	31.50	60.00
1280x720p	44.96	59.94
	45.00	60.00
1920x1080i	33.72	59.94
	33.75	60.00
1920x1080p	27.00	24.00
	33.75	30.00
	67.43	59.94
	67.50	60.00

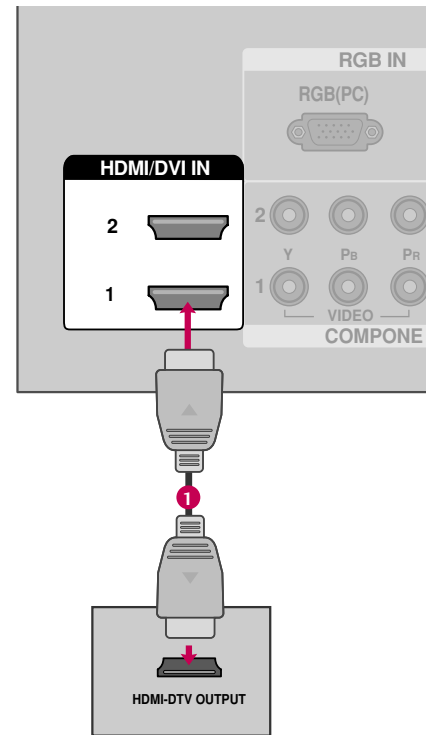
26LG3\*\*

## 1. How to connect

- 1 Connect the digital set-top box to **HDMI/DVI IN1**, **2**, or **3** jack on the TV.
- 2 No separate audio connection is necessary. HDMI supports both audio and video.

## 2. How to use

- Turn on the digital set-top box.  
(Refer to the owner's manual for the digital set-top box.)
- Select the **HDMI1**, **HDMI2**, or **HDMI3** input source on the TV using the **INPUT** button on the remote control.



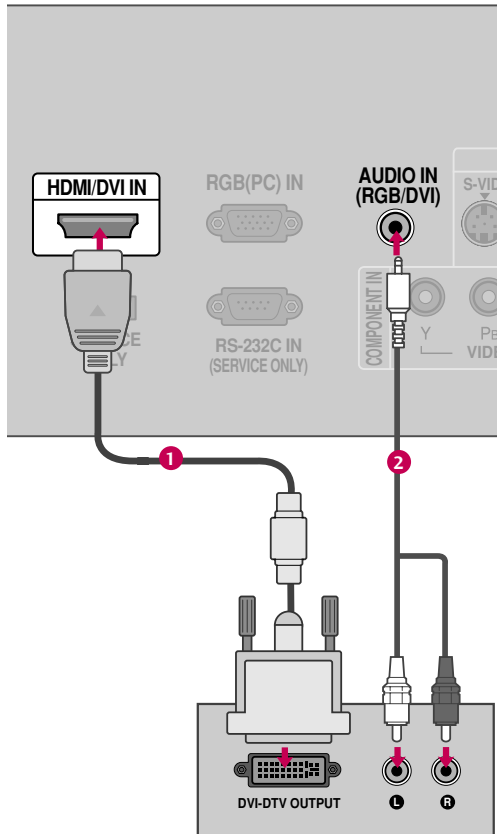
### HDMI-DTV

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480p	31.47	59.94
	31.50	60.00
1280x720p	44.96	59.94
	45.00	60.00
1920x1080i	33.72	59.94
	33.75	60.00
1920x1080p	26.97	23.976
	27.00	24.00
	33.71	29.97
	33.75	30.00
	67.432	59.939
	67.50	60.00

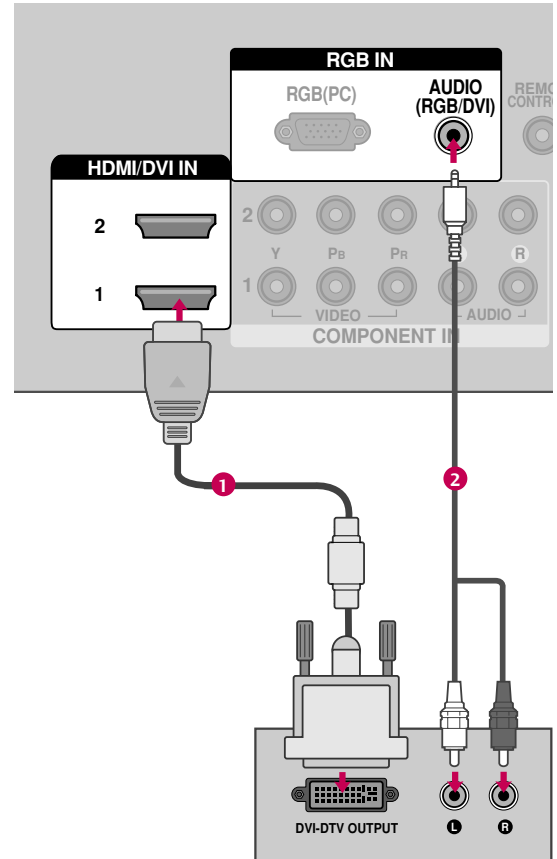
# EXTERNAL EQUIPMENT SETUP

## DVI to HDMI Connection

19/22LG3\*\*



26LG3\*\*



### 1. How to connect

- 1 Connect the DVI output of the digital set-top box to the **HDMI/DVI IN** or **HDMI/DVI IN 1/2/3** jack on the TV.
- 2 Connect the PC audio output to the **AUDIO IN (RGB/DVI)** or **AUDIO (RGB/DVI)** jack on the TV.

### 2. How to use

- Turn on the digital set-top box.  
(Refer to the owner's manual for the digital set-top box.)
- Select the **HDMI** or **HDMI1/2/3** input source on the TV using the **INPUT** button on the remote control.

#### ! NOTE

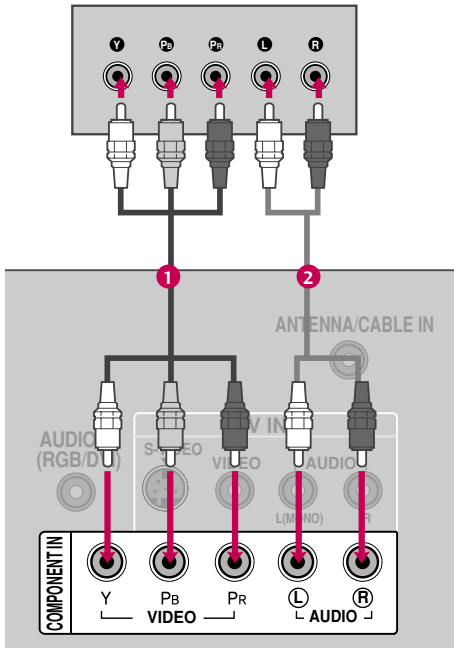
- ▶ A DVI to HDMI cable or adapter is required for this connection. DVI doesn't support audio, so a separate audio connection is necessary.



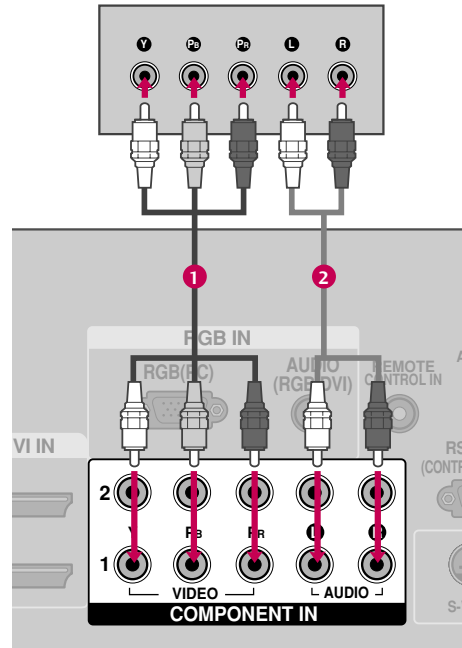
# DVD SETUP

## Component Connection

19/22LG3\*\*



26LG3\*\*



### 1. How to connect

- 1 Connect the video outputs (Y, Pb, Pr) of the DVD to the **COMPONENT IN VIDEO** or **COMPONENT IN VIDEO1** jacks on the TV. Match the jack colors (Y = green, Pb = blue, and Pr = red).
- 2 Connect the audio outputs of the DVD to the **COMPONENT IN AUDIO** or **COMPONENT IN AUDIO1** jacks on the TV.

### 2. How to use

- Turn on the DVD player, insert a DVD.
- Select the **Component** or **Component 1** input source on the TV using the **INPUT** button on the remote control.
- If connected to **COMPONENT IN 2** input, select the **Component 2** input source on the TV.
- Refer to the DVD player's manual for operating instructions.

### Component Input ports

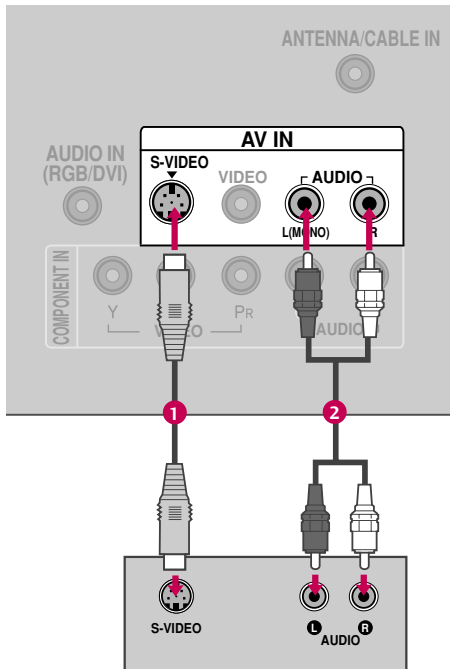
To get better picture quality, connect a DVD player to the component input ports as shown below.

Component ports on the TV	Y	P <sub>B</sub>	P <sub>R</sub>
Video output ports on DVD player	Y	P <sub>B</sub>	P <sub>R</sub>
	Y	B-Y	R-Y
	Y	C <sub>b</sub>	C <sub>r</sub>
	Y	P <sub>b</sub>	P <sub>r</sub>

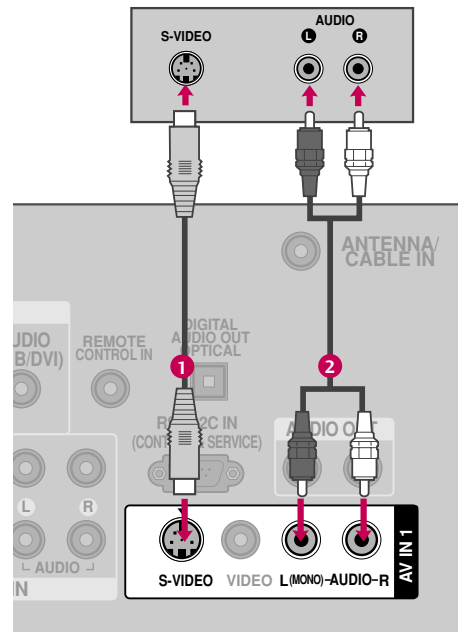
# EXTERNAL EQUIPMENT SETUP

## S-Video Connection

19/22LG3\*\*



26LG3\*\*



### 1. How to connect

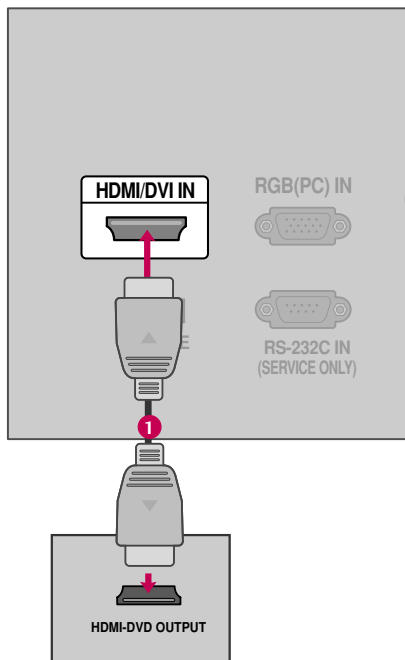
- 1 Connect the S-VIDEO output of the DVD to the **S-VIDEO** input on the TV.
- 2 Connect the audio outputs of the DVD to the **AUDIO** input jacks on the TV.

### 2. How to use

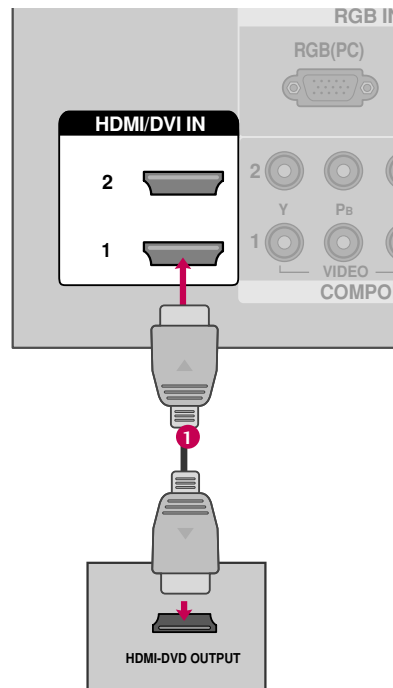
- Turn on the DVD player, insert a DVD.
- Select the **AV** or **AV1** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.

## HDMI Connection

19/22LG3\*\*



26LG3\*\*



### 1. How to connect

- 1 Connect the HDMI output of the DVD to the **HDMI/DVI IN** or **HDMI/DVI IN 1/2/3** jack on the TV.
- 2 No separated audio connection is necessary.  
HDMI supports both audio and video.

### 2. How to use

- Select the **HDMI** or **HDMI1/2/3** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.

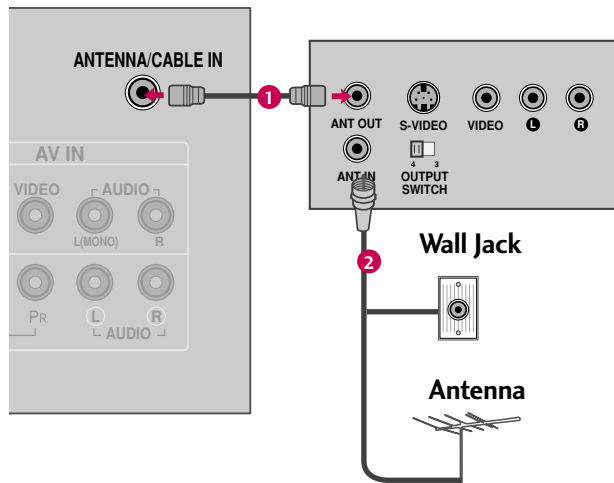
# EXTERNAL EQUIPMENT SETUP

## VCR SETUP

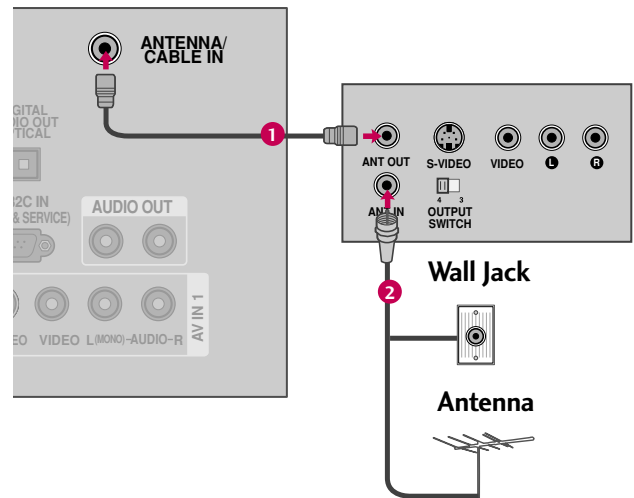
- To avoid picture noise (interference), leave an adequate distance between the VCR and TV.
- If the 4:3 picture format is used; the fixed images on the sides of the screen may remain visible on the screen. This phenomenon is common to all TVs and is not covered by warranty.

### Antenna Connection

19/22LG3\*\*



26LG3\*\*



### 1. How to connect

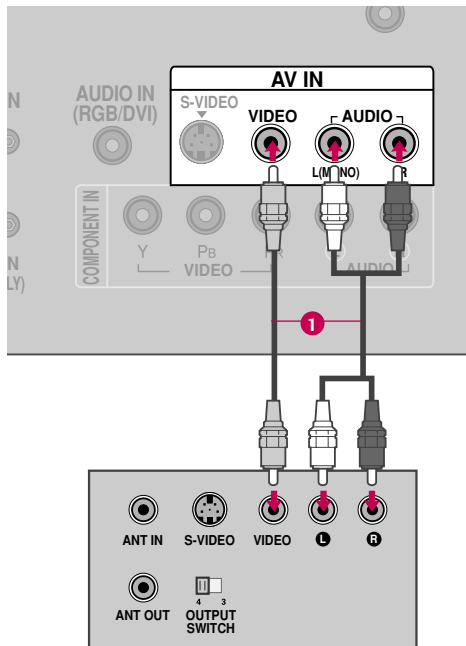
- 1 Connect the RF antenna out socket of the VCR to the **ANTENNA/CABLE IN** socket on the TV.
- 2 Connect the antenna cable to the RF antenna in socket of the VCR.

### 2. How to use

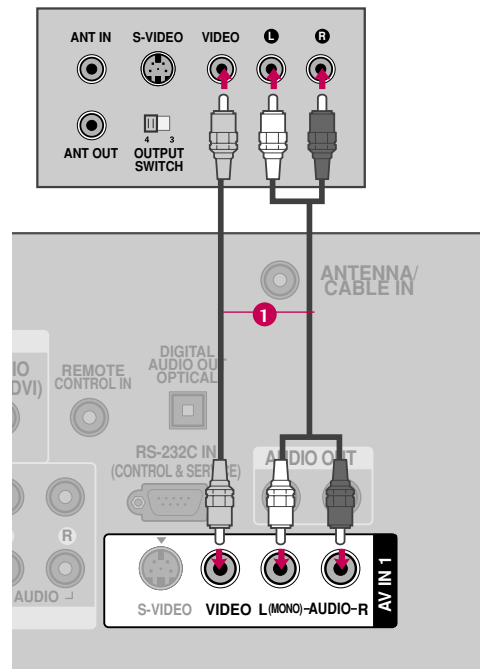
- Set VCR output switch to 3 or 4 and then tune TV to the same channel number.
- Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)

## Composite (RCA) Connection

19/22LG3\*\*



26LG3\*\*



### 1. How to connect

- 1 Connect the **AUDIO/VIDEO** jacks between TV and VCR. Match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red)

### 2. How to use

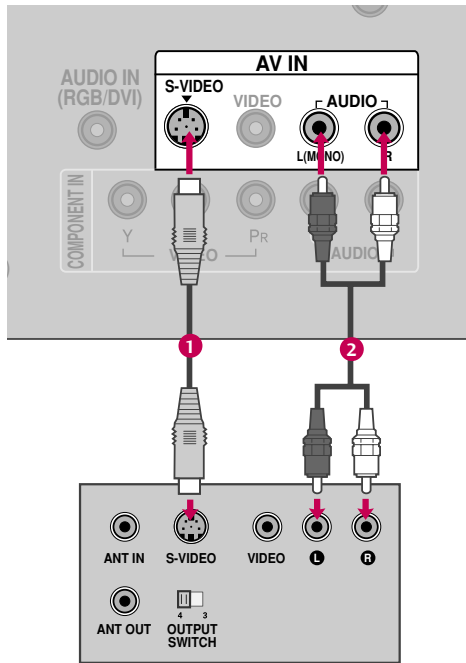
- Insert a video tape into the VCR and press **PLAY** on the VCR. (Refer to the VCR owner's manual.)
- Select the **AV** or **AV1** input source on the TV using the **INPUT** button on the remote control.
- If connected to **AV IN2**, select **AV2** input source on the TV.

**NOTE** ▶ If you have a mono VCR, connect the audio cable from the VCR to the **AUDIO L/MONO** jack of the TV.

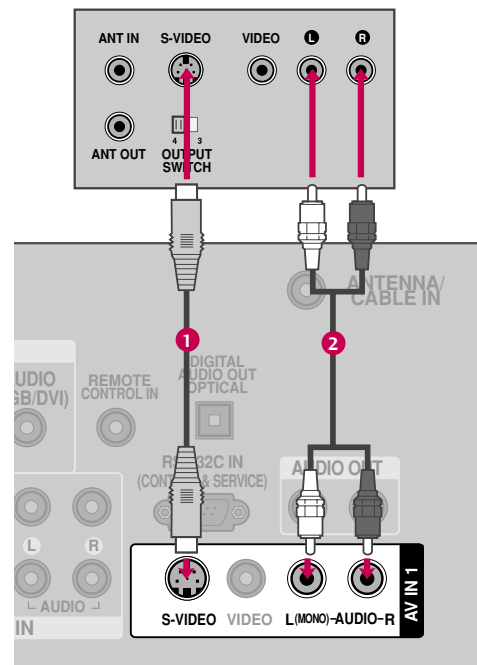
# EXTERNAL EQUIPMENT SETUP

## S-Video Connection

19/22LG3\*\*



26LG3\*\*



### 1. How to connect

- 1 Connect the S-VIDEO output of the VCR to the **S-VIDEO** input on the TV.
- 2 Connect the audio outputs of the VCR to the **AUDIO** input jacks on the TV.

### 2. How to use

- Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
- Select the **AV** or **AV1** input source on the TV using the **INPUT** button on the remote control.

#### ! NOTE

- ▶ The picture quality is improved: compared to normal composite (RCA cable) input.

#### ! CAUTION

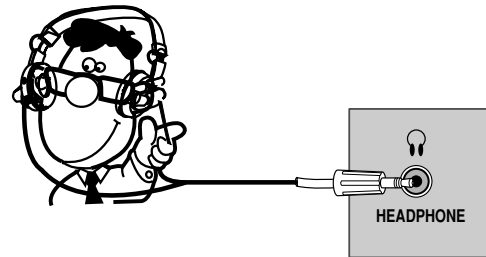
- ▶ Do not connect to both Video and S-Video at the same time. In the event that you connect both Video and the S-Video cables, only the S-Video will work.

## HEADPHONE SETUP (Only 19/22LG3\*\*)

You can listen to the sound through the headphone.

### 1. How to connect

- 1 Plug the headphone into the headphone socket.
- 2 To adjust the headphone volume, press the **VOL +** or **-** button. If you press the **MUTE** button, the sound from the headphone is switched off.



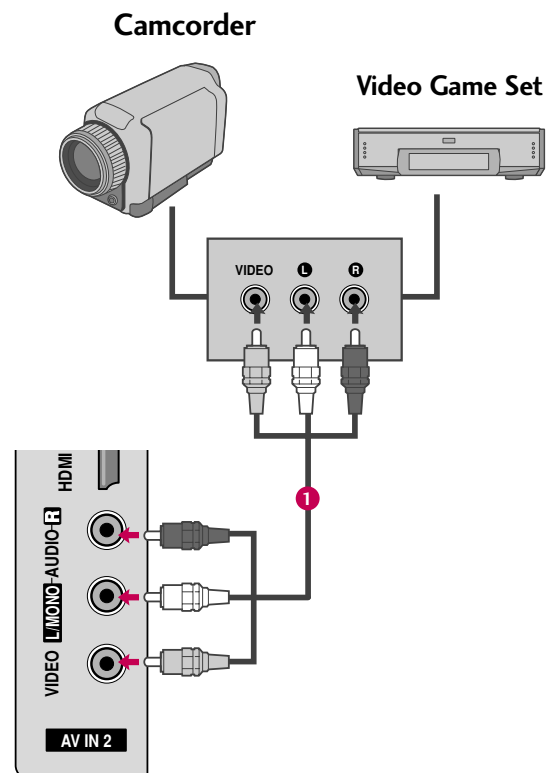
## OTHER A/V SOURCE SETUP (Only 26LG3\*\*)

### 1. How to connect

- 1 Connect the **AUDIO/VIDEO** jacks between TV and external equipment. Match the jack colors. (Video = yellow, Audio Left = white, and Audio Right = red)

### 2. How to use

- Select the **AV2** input source on the TV using the **INPUT** button on the remote control.
- If connected to **AV IN1** input, select the **AV1** input source on the TV.
- Operate the corresponding external equipment.



# EXTERNAL EQUIPMENT SETUP

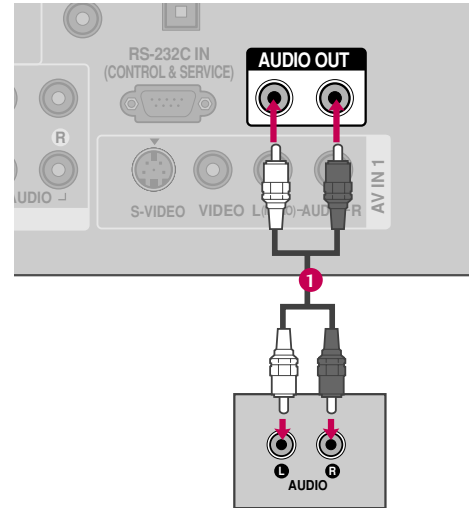
## AUDIO OUT CONNECTION (Only 26LG3\*\*)

Send the TV's audio to external audio equipment via the Audio Output port.

### Analog

#### 1. How to connect

- 1 Connect audio outputs to the TV's **AUDIO OUT** jacks.
- 2 Set the "TV Speaker option - Off" in the AUDIO menu. (▶ p.65). See the external audio equipment instruction manual for operation.



### Digital

#### 1. How to connect

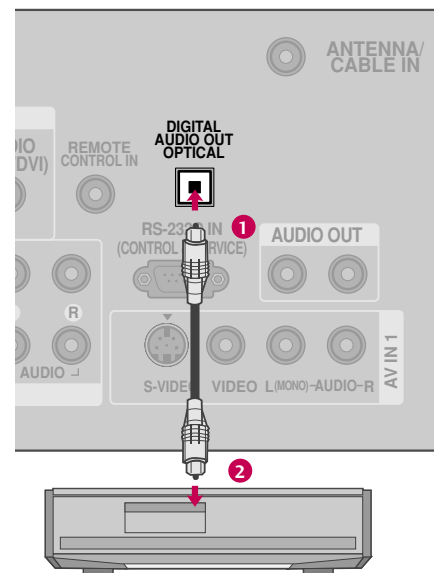
- 1 Connect one end of the optical or coaxial cable to the TV's **OPTICAL** port of **DIGITAL AUDIO OUT**.
- 2 Connect the other end of the optical cable to the digital audio input on the audio equipment.
- 3 Set the "TV Speaker option - Off" in the AUDIO menu. (▶ p.65). See the external audio equipment instruction manual for operation.

#### NOTE

- ▶ When connecting with external audio equipments, such as amplifiers or speakers, you can turn the TV speakers off in the menu. (▶ p.65)

#### CAUTION

- ▶ Do not look into the optical output port. Looking at the laser beam may damage your vision.
- ▶ Block the SPDIF out (optical) about the contents with ACP(Audio Copy Protection) function.



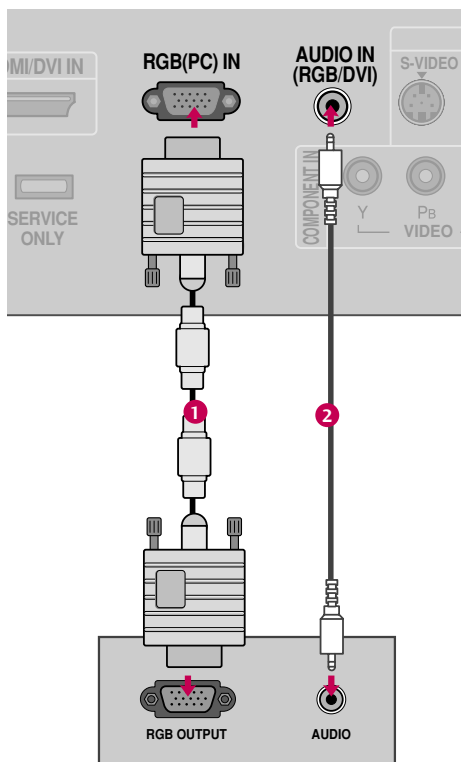


## PC SETUP

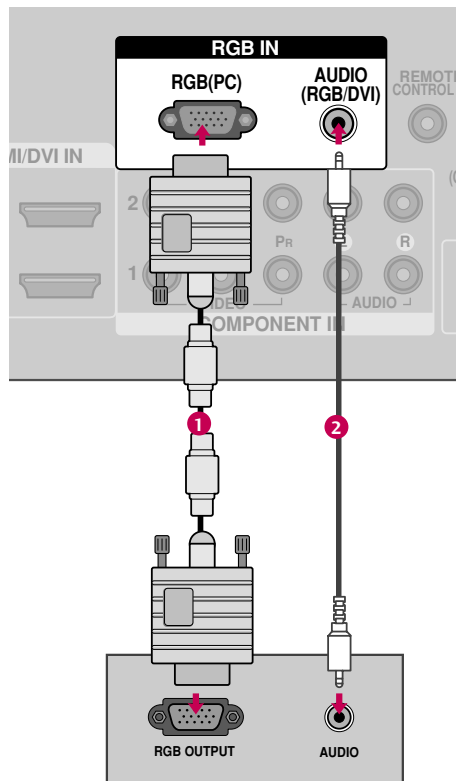
This TV provides Plug and Play capability, meaning that the PC adjusts automatically to the TV's settings.

### VGA (D-Sub 15 pin) Connection

19/22LG3\*\*



26LG3\*\*



### 1. How to connect

- 1 Connect the VGA output of the PC to the **RGB (PC) IN** or **RGB (PC)** jack on the TV.
- 2 Connect the PC audio output to the **AUDIO IN (RGB/DVI)** or **AUDIO (RGB/DVI)** jack on the TV.

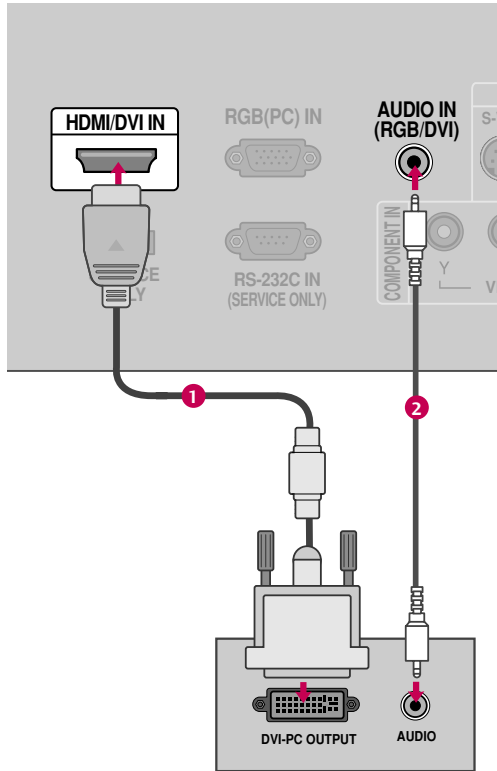
### 2. How to use

- Turn on the PC and the TV.
- Select the **RGB-PC** input source on the TV using the **INPUT** button on the remote control.

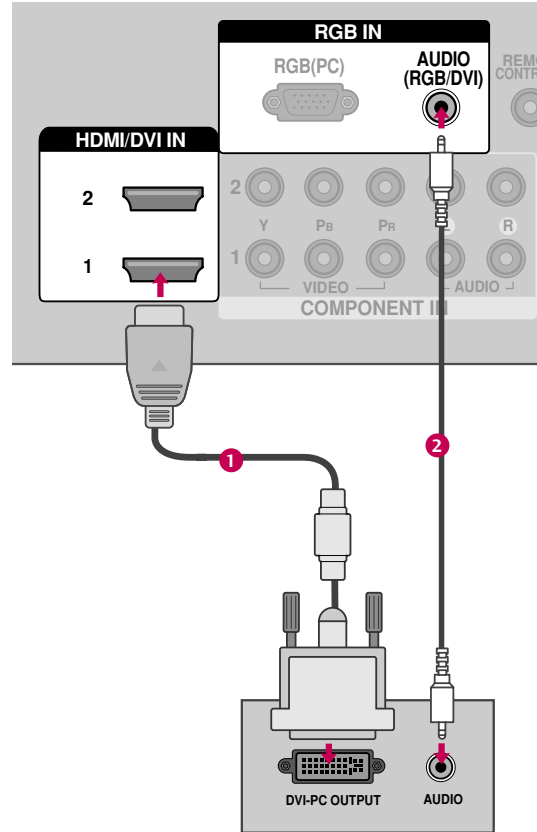
# EXTERNAL EQUIPMENT SETUP

## DVI to HDMI Connection

19/22LG3\*\*



26LG3\*\*



### 1. How to connect

- 1 Connect the DVI output of the PC to the **HDMI/DVI IN** or **HDMI/DVI IN 1/2/3** jack on the TV.
- 2 Connect the PC audio output to the **AUDIO IN (RGB/DVI)** or **AUDIO (RGB/DVI)** jack on the TV.

### 2. How to use

- Turn on the PC and the TV.
- Select the **HDMI** or **HDMI 1/2/3** input source on the TV using the **INPUT** button on the remote control.

## ! NOTES

- ▶ To get the the best picture quality, adjust the PC graphics card to 1440x900 (19LG3\*\*), 1680x1050 (22LG3\*\*), 1360x768 (26LG3\*\*).
- ▶ Depending on the graphics card, DOS mode may not work if a HDMI to DVI Cable is in use.
- ▶ In PC mode, there may be noise associated with the resolution, vertical pattern, contrast or brightness. If noise is present, change the PC output to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the PICTURE menu until the picture is clear.
- ▶ Avoid keeping a fixed image on the screen for a long period of time. The fixed image may become permanently imprinted on the screen.
- ▶ The synchronization input form for Horizontal and Vertical frequencies is separate.

## Supported Display Specifications (RGB-PC, HDMI-PC)

### For 19/22LG3\*\*

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
640x350	31.469	70.08 ●
720x400	31.469	70.08 ●
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1280x768	47.776	59.87
1360x768 RGB-PC	47.712	60.01
1360x768 HDMI-PC	47.720	59.799
1440x900	55.5	59.90
1400x1050 (22LG3** only)	64.744	59.948
1680x1050 (22LG3** only)	65.290	59.954

\* Only RGB-PC mode

### For 26LG3\*\*

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
640x350	31.469	70.08 ●
720x400	31.469	70.08 ●
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1280x768	47.776	59.87
1360x768	47.720	59.799
1366x768	47.130	59.65

\* Only RGB-PC mode

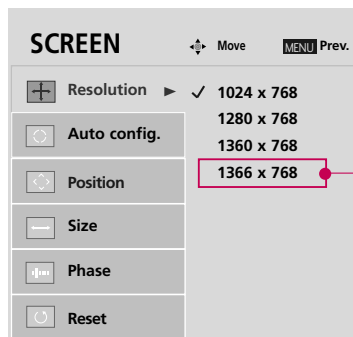
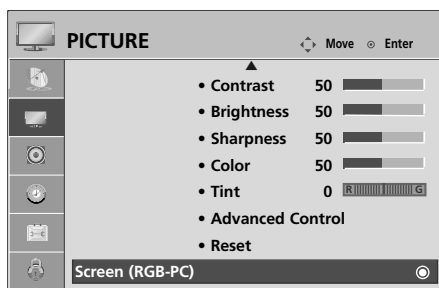
# EXTERNAL EQUIPMENT SETUP

## Screen Setup for PC mode










### Selecting Resolution

You can choose the resolution in RGB-PC mode.

The **Position**, **Phase**, and **Size** can also be adjusted.

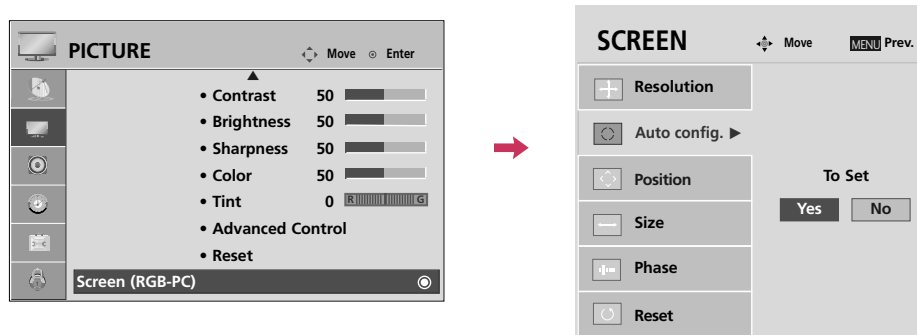











Only 26LG3\*\*

-   Select **PICTURE**.
-   Select **Screen (RGB-PC)**.
-   Select **Resolution**.
-   Select the desired resolution.
- 

## Auto Configure

Automatically adjusts picture position and minimizes image instability. After adjustment, if the image is still not correct, try using the manual settings or a different resolution or refresh rate on the PC.



- 1   Select **PICTURE**.
- 2   Select **Screen (RGB-PC)**.
- 3   Select **Auto config.**
- 4   Select **Yes**.
- 5  Start Auto Configuration.

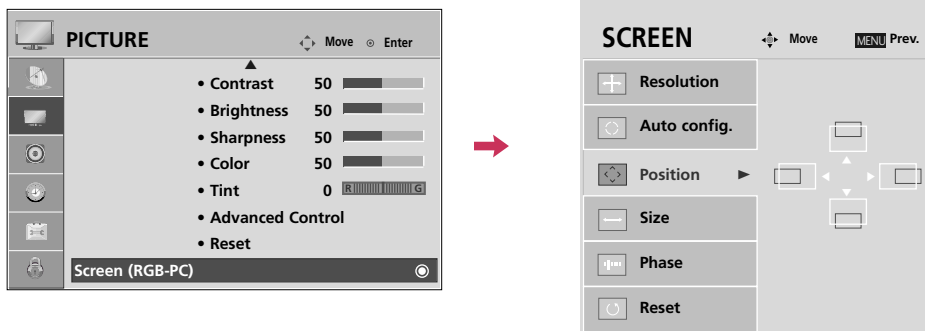
- If the position of the image is still not correct, try Auto adjustment again.
- If picture needs to be adjusted again after Auto adjustment in RGB-PC, you can adjust the **Position**, **Size** or **Phase**.




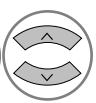

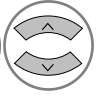



# EXTERNAL EQUIPMENT SETUP

## Adjustment for screen Position, Size, and Phase

If the picture is not clear after auto adjustment and especially if characters are still trembling, adjust the picture phase manually.

This feature operates only in RGB-PC mode.

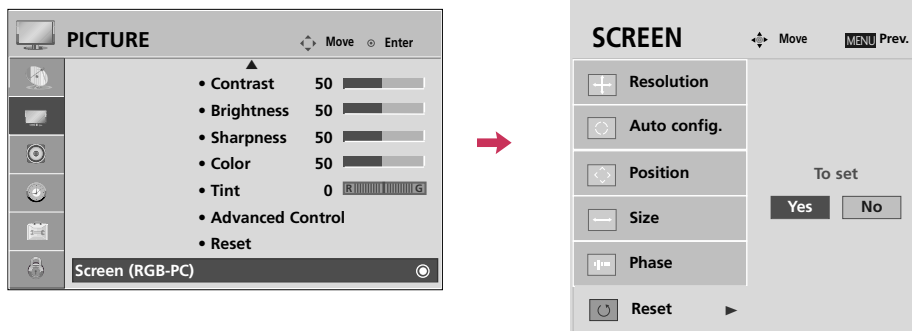











-   Select **PICTURE**.
-   Select **Screen (RGB-PC)**.
-   Select **Position, Size, or Phase**.
-   Make appropriate adjustments.
- 

- **Position:** This function is to adjust picture to left/right and up/down as you prefer.
- **Size:** This function is to minimize any vertical bars or stripes visible on the screen background. And the horizontal screen size will also change.
- **Phase:** This function allows you to remove any horizontal noise and clear or sharpen the image of characters.

## Screen Reset (Reset to original factory values)

Returns **Position**, **Size**, and **Phase** to the default factory settings.  
This feature operates only in RGB-PC mode.



- 1   Select **PICTURE**.
- 2   Select **Screen (RGB-PC)**.
- 3   Select **Reset**.
- 4   Select **Yes**.
- 5 

# WATCHING TV / CHANNEL CONTROL

## REMOTE CONTROL FUNCTIONS

When using the remote control, aim it at the remote control sensor on the TV.

**PICTURE** Selects the factory preset picture depend on the viewing environment. ▶ p.52

**SOUND** Selects the factory preset sound for type of program. ▶ p.62

**SAP**

- Analog mode: Selects MTS sound (Mono, Stereo, or a SAP) ▶ p.67
- DTV mode: Changes the audio language.

**RATIO** Change the aspect ratio. ▶ p.50

**VOLUME UP /DOWN** Increase/decrease the sound level.

**FAV** Scroll through the programmed Favorite channels. ▶ p.41

**CC** Select a closed caption. ▶ p.70

**MUTE** Switch the sound on or off. ▶ p.40

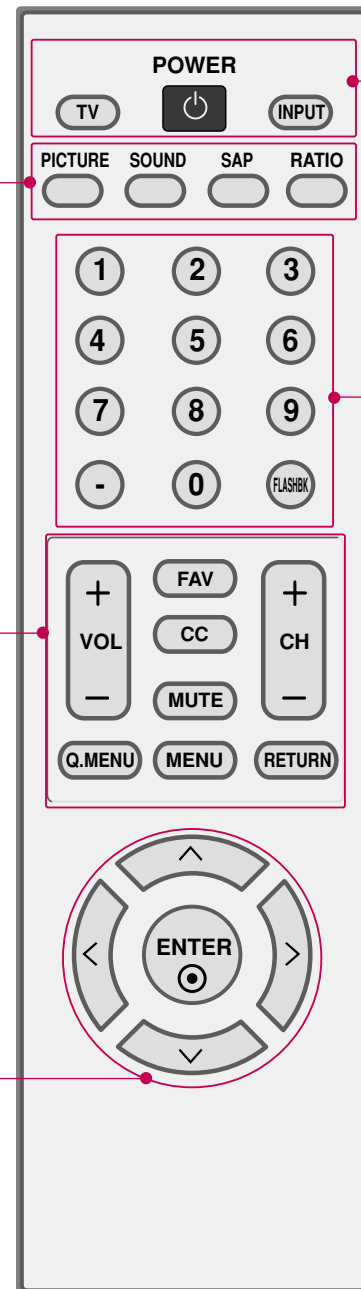
**CHANNEL UP/DOWN** Select available channels.

**Q.MENU** Select the desired quick menu source. ▶ p.41

**MENU** Displays the main menu.

**RETURN** Allows the user to move return one step in an interactive application or other user interaction function.

**THUMBSTICK** (Up/Down/Left Right/ENTER) Navigate the on-screen menus and adjust the system settings to your preference.





**POWER** Turns your TV on or off.

**TV** Returns to the last TV channel.

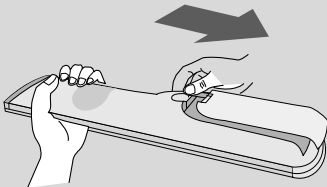
**INPUT** External input modes rotate in regular sequence

#### NUMBER button

**— (DASH)** Used to enter a program number for multiple program channels such as 2-1, 2-2, etc.

**FLASHBK** Tune to the last channel viewed.

## Installing Batteries



- Open the battery compartment cover on the back side and install the batteries matching correct polarity (+ with +, - with -).
- Install two 1.5V AAA batteries. Don't mix old or used batteries with new ones.
- Close cover.

# WATCHING TV / CHANNEL CONTROL

## TURNING ON TV

---

- 1** First, connect power cord correctly.  
At this moment, the TV switches to standby mode.
    - In standby mode to turn TV on, press the  $\phi/|$  , **INPUT**, **CH (+ or -)** button on the TV or press the **POWER**, **INPUT**, **TV**, **CH (+ or -)**, **Number (0~9)** button on the remote control.
  - 2** Select the viewing source by using the **INPUT** button on the remote control.
    - This TV is programmed to remember which power state it was last set to, even if the power cord is out.
  - 3** When finished using the TV, press the **POWER** button on the remote control. The TV reverts to standby mode.
- 

### ! NOTE

- ▶ If you intend to be away on vacation, disconnect the power plug from the wall power outlet.

## CHANNEL SELECTION

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- 1** Press the **CH (+ or -)** or **NUMBER** buttons to select a channel number.
- 

## VOLUME ADJUSTMENT

Adjust the volume to suit your personal preference.

---

- 1** Press the **VOL (+ or -)** button to adjust the volume.
  - 2** If you want to switch the sound off, press the **MUTE** button.
  - 3** You can cancel the Mute function by pressing the **MUTE** or **VOL (+ or -)** button.
-


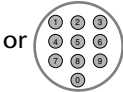
## QUICK MENU / FAVORITE CHANNEL SETUP

Your TV's OSD (On Screen Display) may differ slightly from what is shown in this manual.

Q.Menu (Quick Menu) is a menu of features which users might use frequently.


- **Aspect Ratio:** Selects your desired picture format.
- **Backlight:** Adjust the brightness of LCD panel to control the brightness of the screen.
- **Picture Mode:** Selects the factory preset picture depend on the viewing environment.
- **Sound Mode:** Selects the factory preset sound for type of program.
- **Caption:** Select on or off.
- **Multi Audio:** Changes the audio language (Digital signal).  
**SAP:** Selects MTS sound (Analog signal).
- **Sleep Timer:** Select the amount of time before your TV turns off automatically.
- **Del/Add/Fav:** Select channel you want to add/delete or add the channel to the Favorite List.

### Favorite Channle Setup

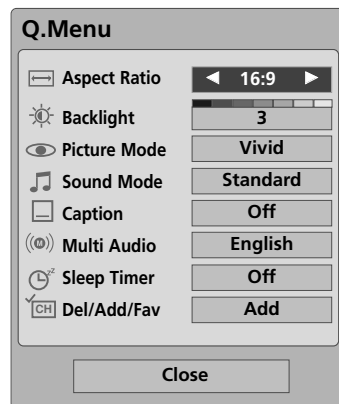
1  or  Select your desired channel.

2   Select **Del/Add/Fav**.


3  Select **Favorite**.


4  Return to TV viewing.

- To tune to a favorite channel, press the **FAV** (Favorite) button repeatedly.



1   Display each menu.

2  Make appropriate adjustments.

3  Return to TV viewing

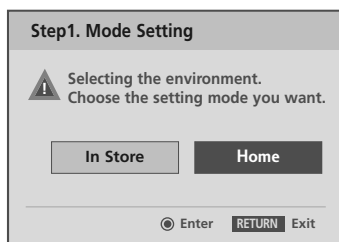
# WATCHING TV / CHANNEL CONTROL

## INITIAL SETTING

This Function guides the user to easily set the essential items for viewing the TV for the first time when purchasing the TV. It will be displayed on the screen when turning the TV on for the first time. It can also be activated from the user menus.

- Default selection is “**Home**”. We recommend setting the TV to “**Home**” mode for the best picture in your home environment.
- “**In-store**” Mode is only intended for use in retail environments. Customers can adjust the “**Picture menu - Picture mode**” manually while inspecting the TV, but the TV will automatically return to preset in-store mode after 5 minutes.





### Step1. Mode setting



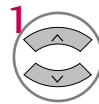
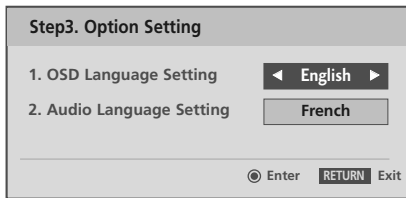
- 1  Select **Home** Mode.
- 2 

### Step2. Time setting

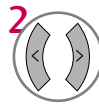


- 1  Select **Auto** or **Manual**.
- 2   Select desired time option.
- 3 

### Step3. Option setting



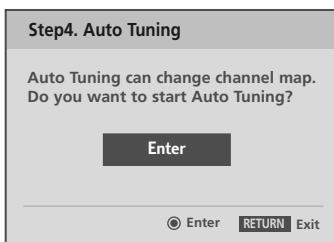
Select **OSD Language Setting** or **Audio Language Setting**.



Select your desired language.



### Step4. Auto Tuning



Start **Auto Tuning**.

#### ! NOTE

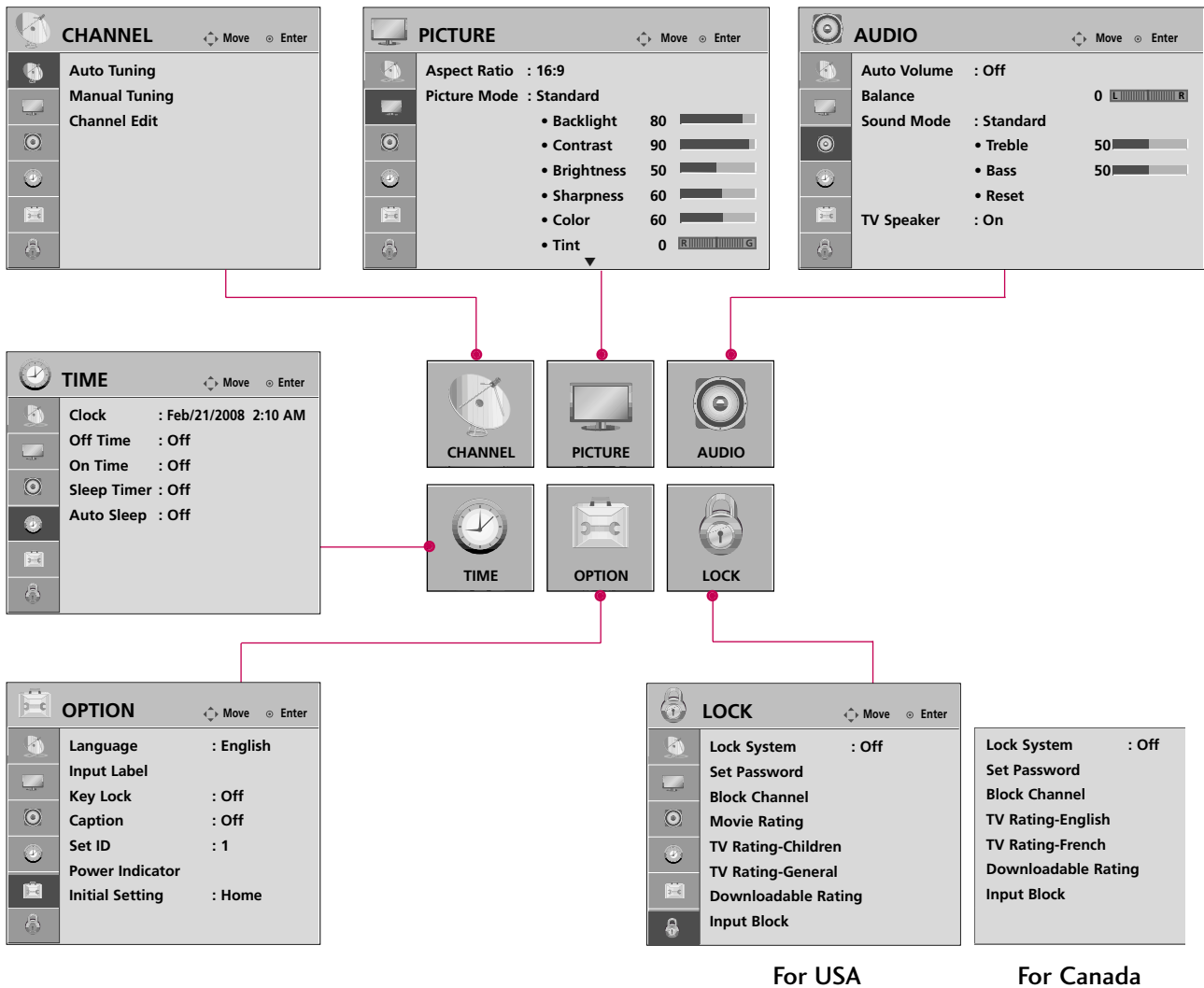
- You can also adjust **Initial Setting** in the **OPTION** menu.

# WATCHING TV / CHANNEL CONTROL

## ON-SCREEN MENUS SELECTION

Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.

WATCHING TV / CHANNEL CONTROL



- 1 Display each menu.
- 2 Select a menu item.
- 3 Enter to the pop up menu.
- 4 Return to TV viewing.

**NOTE**

- ▶ Auto Volume, TV Speaker, Power Indicator: Only 26LG3\*\*.
- ▶ Set ID: Only 22LG30DC, 26LG3\*\*.










# CHANNEL SETUP

## Auto Scan (Auto Tuning)

Automatically finds all channels available through antenna or cable inputs, and stores them in memory on the channel list.

Run Auto Tuning again after any Antenna/Cable connection changes.



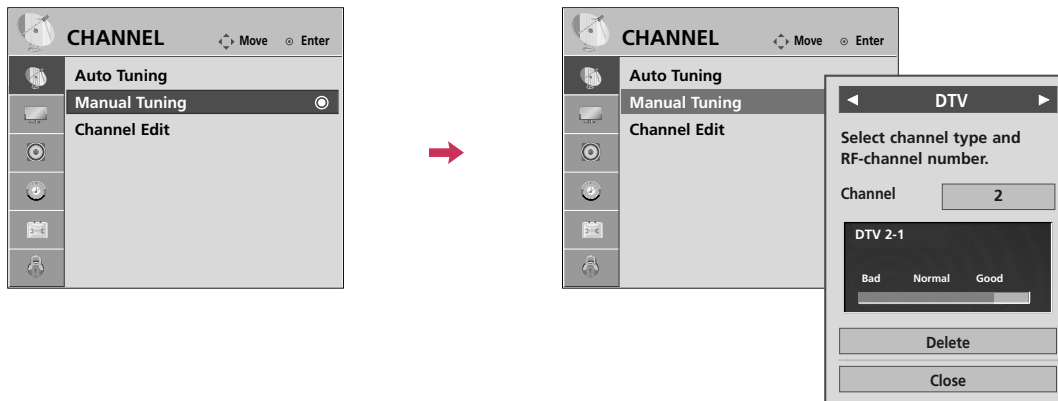
- 1   Select **CHANNEL**.
- 2   Select **Auto Tuning**.
- 3   Select **Yes**.
- 4  Run **Auto tuning**.
- 5  Return to the previous menu.
-  Return to TV viewing.












- A password is required to gain access to Auto Tuning menu if the Lock System is turned on.

# WATCHING TV / CHANNEL CONTROL

## Add/Delete Channel (Manual Tuning)

If selecting DTV or CADTV input signal, you can view the on-screen signal strength monitor to see the quality of the signal being received.



-   Select **CHANNEL**.
-   Select **Manual Tuning**.
-   Select **DTV, TV, CADTV, or CATV**.
-   Select channel you want to add or delete.
-   Select **Add** or **Delete**.
-  Return to the previous menu.
-  Return to TV viewing.

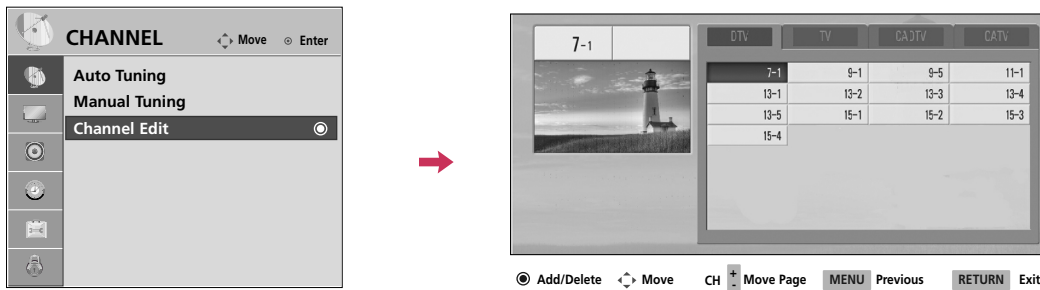
■ A password is required to gain access to Manual Tuning menu if the Lock System is turned on.












## Channel Editing

A custom list can be created by toggling each channel on or off with **ENTER** button. The channels in the Custom List are displayed in black and the channels deleted from the Custom List are displayed in gray.

Once a channel is highlighted you can add or delete the channel by referring to the small window at the top-right corner of the screen.

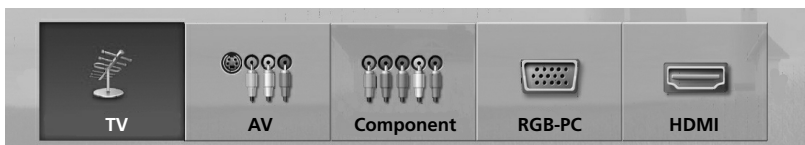


- 1   Select **CHANNEL**.
- 2   Select **Channel Edit**.
- 3   Select a channel.
- 4  Select channel you want to add or delete.
- 5  Return to the previous menu.
-  Return to TV viewing.

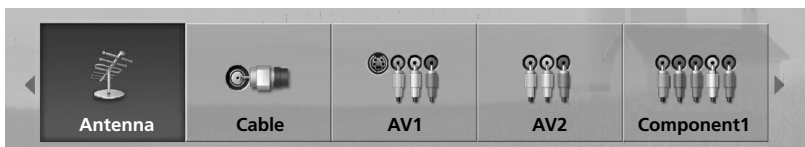
# WATCHING TV / CHANNEL CONTROL

## INPUT LIST

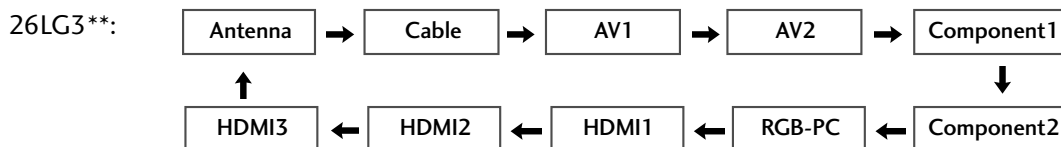
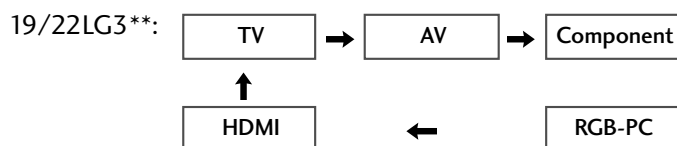
### 19/22LG3\*\*



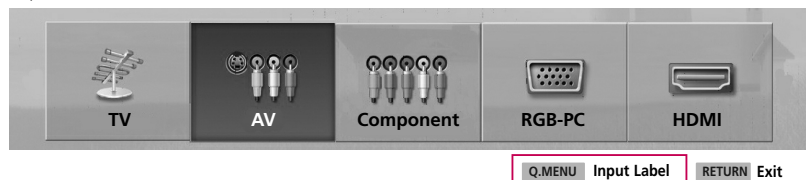
### 26LG3\*\*



WATCHING TV / CHANNEL CONTROL



ie)

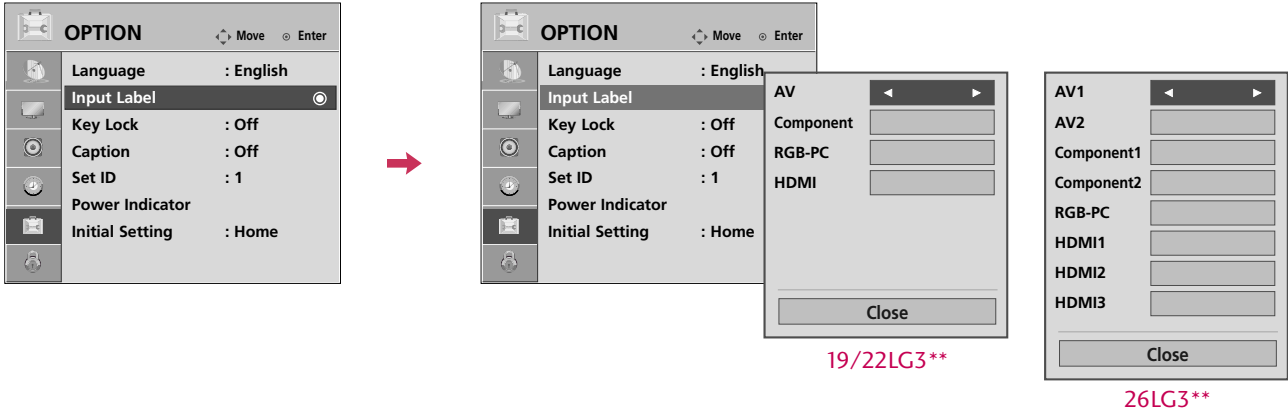


Select a desired input source (except **Antenna, Cable** or **TV**). Then, you can select your desired Input Label with using Q.MENU button. ► **p.49**

- **Antenna:** Select it to watch over-the-air broadcasts.
- **Cable:** Select it to watch cable and digital cable.
- **TV:** Select it to watch over-the-air, cable and digital cable broadcasts.
- **AV:** Select them to watch a VCR or other external equipment.
- **Component:** Select them to watch DVD or a Digital set-top box.
- **RGB-PC:** Select it to view PC input.
- **HDMI:** Select them to watch high definition devices.

# INPUT LABEL

You can set a label for each input source when it's not in use.



## With using OPTION menu

- 1 Select **OPTION**.
- 2 Select **Input Label**.
- 3 Select the source.
- 4 Select the label.
- 5 Return to the previous menu.
- Return to TV viewing

## With using INPUT button

- 1 Select the source.
- 2 Select the label.
- 3 Return to the previous menu.
- Return to TV viewing

# PICTURE CONTROL

## PICTURE SIZE (ASPECT RATIO) CONTROL

This feature lets you choose the way an analog picture with a 4:3 aspect ratio is displayed on your TV.

- RGB-PC input source use 4:3 or 16:9 aspect ratio.

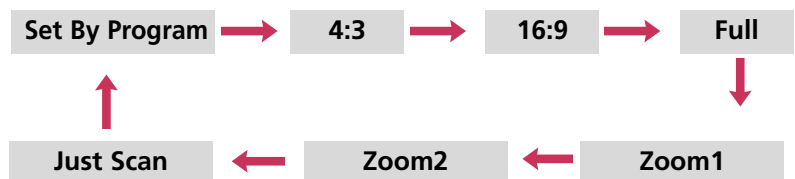
### ! NOTE

- ▶ If a fixed image is displayed on the screen for a long time, the image could become imprinted on the screen and remain visible.

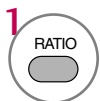
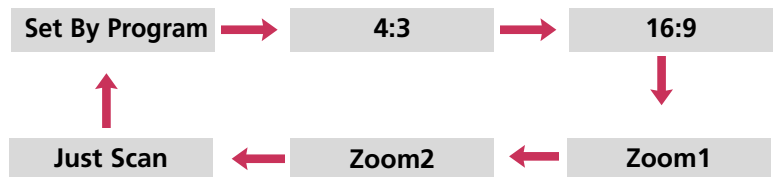
This phenomenon is common to all manufacturers and is not covered by warranty. Although, after watching video that did not fill the screen, any after-image from the black bars will normally dissipate after a few minutes.



### 19/22LG3\*\*



### 26LG3\*\*



Select the desired picture format.

## Set by program

Selects the proper picture proportion to match the source's image.

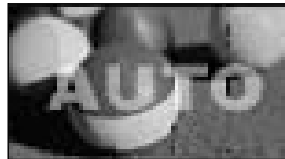
(4:3 → 4:3)



19/22LG3\*\* (16:9 → 16:9)



26LG3\*\* (16:9 → 16:9)



## 4:3

Choose 4:3 when you want to view a picture with an original 4:3 aspect ratio.



## 16:9

Adjust the picture horizontally, in a linear proportion to fill the entire screen.

19/22LG3\*\*



26LG3\*\*



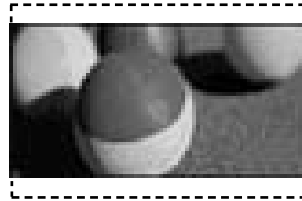
## Full (19/22LG3\*\* only)

When TV receives the wide screen signal, it will lead you to adjust the picture horizontally or vertically, in a linear proportion, to fill the entire screen fully.



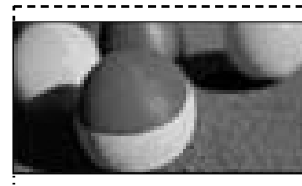
## Zoom 1

Choose Zoom 1 when you want to view the picture without any alteration. However, the top and bottom portions of the picture will be cropped.



## Zoom 2

Choose Zoom 2 when you want the picture to be altered, both vertically extended and cropped. The picture taking a halfway trade off between alteration and screen coverage.

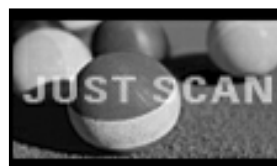


## Just Scan

Following selection will lead to you view the picture of best quality without loss of original picture in high resolution image.

Notes: If there are noise in original picture, you can see the noise at the edge.

**Just Scan** operates only in DTV/CADTV/Component/HDMI-DTV/DVI-DTV (720p/1080i/1080p) input source.

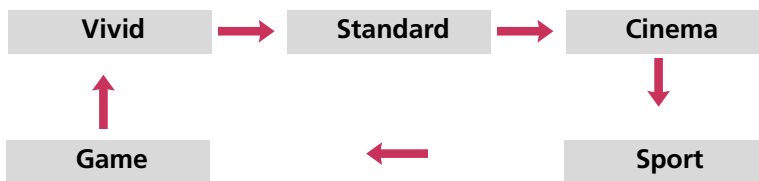
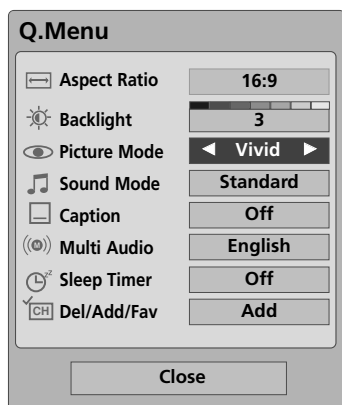


# PICTURE CONTROL


## PRESET PICTURE SETTINGS

### Picture Mode - Preset

There are factory presets for picture settings available in the user menus. You can use a preset, change each setting manually.



1  Select **Vivid**, **Standard**, **Cinema**, **Sport**, or **Game**.











2  Return to TV viewing.

■ **Vivid**, **Standard**, **Cinema**, **Sport**, or **Game** Settings are preset for the optimum picture quality at the factory and are not adjustable.

## Color Tone - Preset

Choose one of three automatic color adjustments. Set to warm to enhance hotter colors such as red, or set to cool to see less intense colors with more blue.



-   Select **PICTURE**.
-   Select **Advanced Control**.
-   Select **Color Temperature**.
-   Select **Cool, Medium, or Warm**.
-  Return to the previous menu.
-  Return to TV viewing.

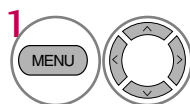
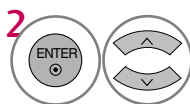
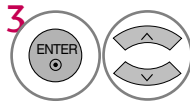
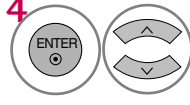
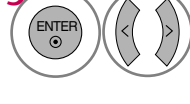


# PICTURE CONTROL

## MANUAL PICTURE ADJUSTMENT

### Picture Mode - User Mode

Adjust the picture appearance to suit your preference and viewing situations.



-  Select **PICTURE**.
-  Select **Picture Mode**.
-  Select **Vivid, Standard, Cinema, Sport, or Game**.
-  Select **Backlight, Contrast, Brightness, Sharpness, Color, or Tint**.
-  Make appropriate adjustments.
-  Return to the previous menu.
-  Return to TV viewing.



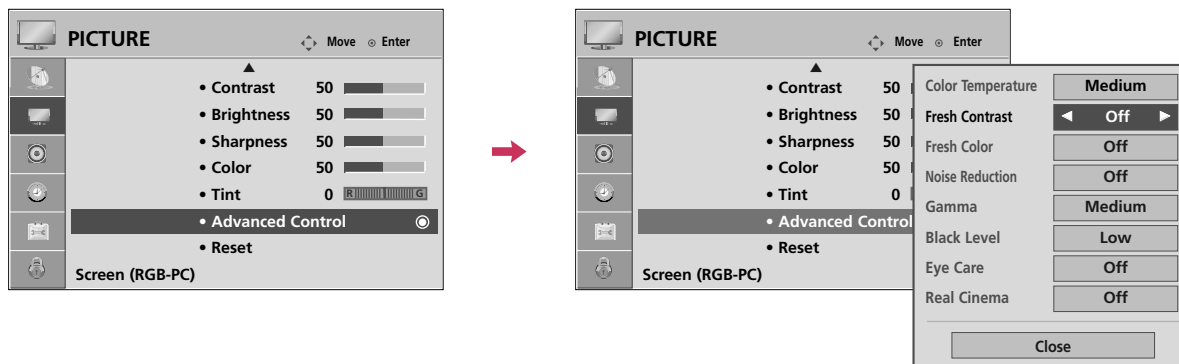
# PICTURE IMPROVEMENT TECHNOLOGY










**Fresh Contrast:** Optimizes the contrast automatically according to the brightness of the reflection.

**Fresh Color:** Adjusts the color of the reflection automatically to reproduce as close as possible natural colors.

**Noise Reduction:** Removes interference up to the point where it does not damage the original picture.

**Gamma:** High gamma values display whitish images and low gamma values display high contrast images.

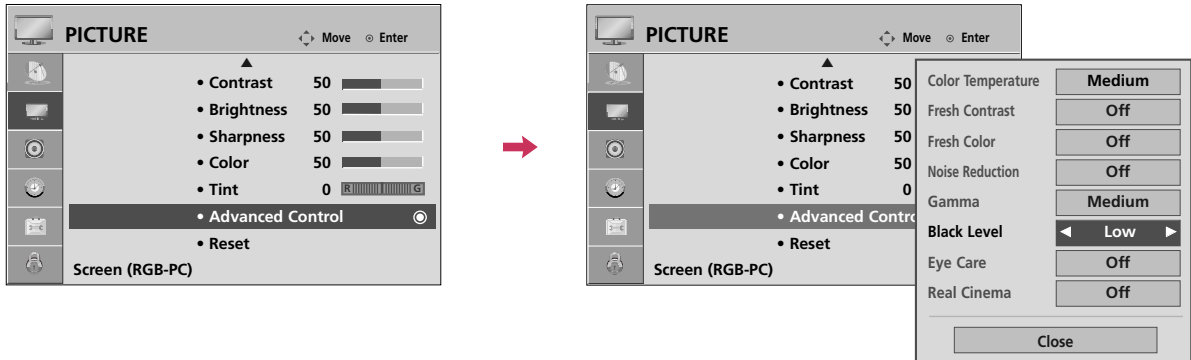












- 1   Select **PICTURE**.
- 2   Select **Advanced Control**.
- 3   Select **Fresh Contrast, Fresh Color, Noise Reduction, or Gamma**.
- 4  Select your desired options.
- 5  Return to the previous menu.
-  Return to TV viewing.

# PICTURE CONTROL

## ADVANCED CONTROL - BLACK (DARKNESS) LEVEL

Adjusting the contrast and the brightness of the screen using the black level of the screen. This feature is disabled in DTV and RGB-PC mode.



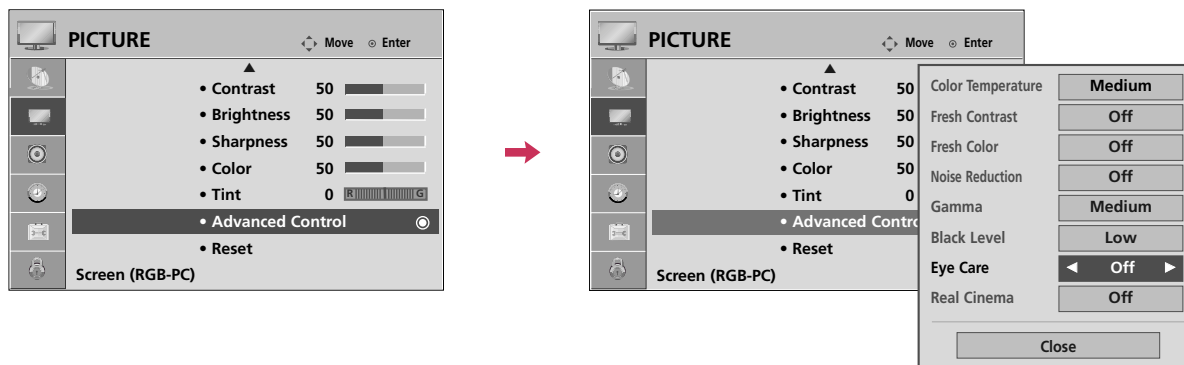
- 1   Select **PICTURE**.
- 2   Select **Advanced Control**.
- 3   Select **Black Level**.
- 4   Select **Low** or **High**.
- 5  Return to the previous menu.
-  Return to TV viewing.











- **Low:** The reflection of the screen gets darker.
- **High:** The reflection of the screen gets brighter.
- **Auto:** Realizing the black level of the screen and set it to High or Low automatically.

## ADVANCED CONTROL - EYE CARE - Only 26LG3\*\*

Dims extremely bright pictures.

This feature is disabled in "Picture Mode-Vivid, Cinema".



-   Select **PICTURE**.
-   Select **Advanced Control**.
-   Select **Eye Care**.
-   Select **On** or **Off**.
-  Return to the previous menu.
-  Return to TV viewing.

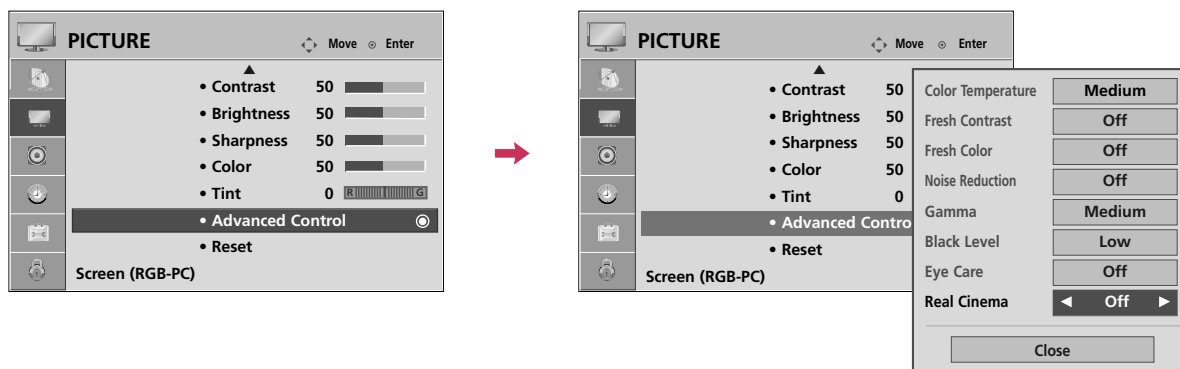
# PICTURE CONTROL











## ADVANCED CONTROL - REAL CINEMA

Set up the TV for the best picture appearance for viewing movies.

When you operate Real Cinema (3:2 Pull-Down Mode or Cinema Correction Mode), the TV will adjust 24 fps video from movies to 30 fps video for display.

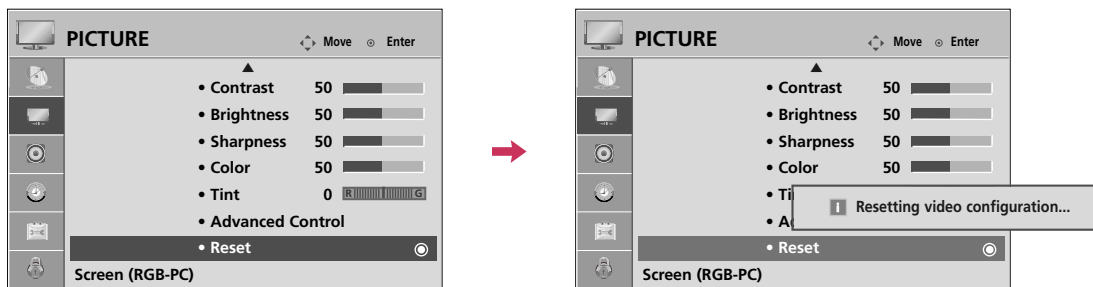
This feature operates only in TV (Analog TV/CATV, Digital DTV/CADTV), AV1, AV2, Component 480i/1080i, and HDMI 1080i mode.









- 1   Select **PICTURE**.
- 2   Select **Advanced Control**.
- 3   Select **Real Cinema**.
- 4   Select **On** or **Off**.
- 5  Return to the previous menu.
-  Return to TV viewing.

# PICTURE RESET

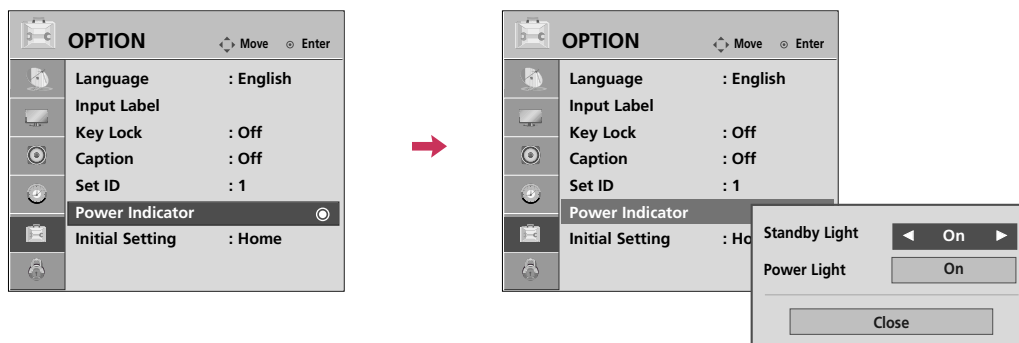
Settings of the selected picture modes return to the default factory settings.












- 1   Select **PICTURE**.
- 2   Select **Reset**.
- 3  Initialize the adjusted value.
- 4  Return to TV viewing.

# PICTURE CONTROL

## POWER INDICATOR - Only 26LG3\*\*



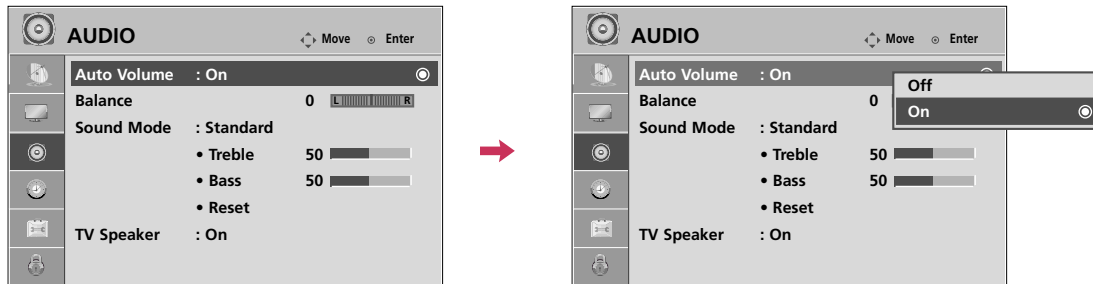
-   Select **OPTION**.
-   Select **Power Indicator**.
-   Select **Standby Light** or **Power Light**.
-  Select your desired options.
-  Return to the previous menu.
-  Return to TV viewing.









- **Off:** Power/Standby indicator will turn off.
- **On:** Power/Standby indicator will turn on.

# SOUND & LANGUAGE CONTROL

## AUTO VOLUME LEVELER (AUTO VOLUME) - Only 26LG3\*\*

Auto Volume makes sure that the volume level remains consistent whether you are watching a commercial or a regular TV program.



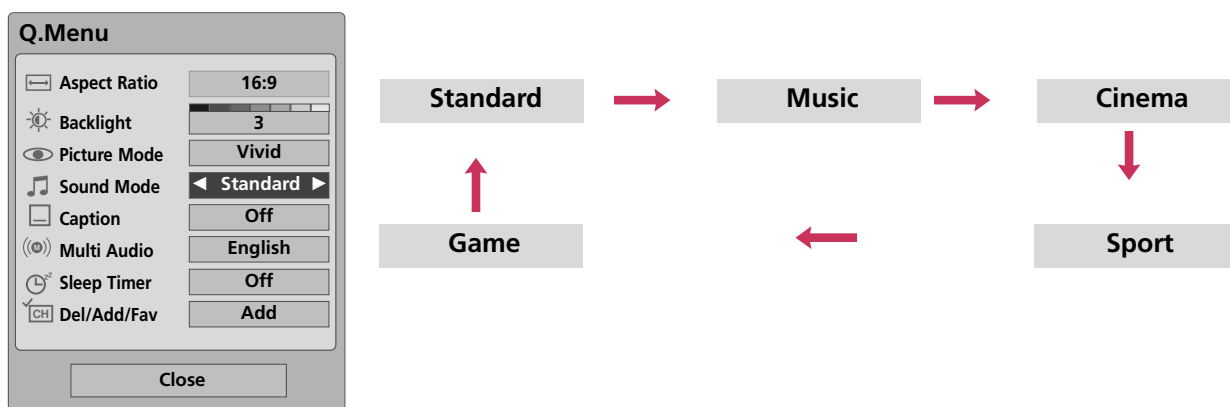
-   Select **AUDIO**.
-   Select **Auto Volume**.
-   Select **On** or **Off**.
-  Return to the previous menu.
-  Return to TV viewing.

# SOUND & LANGUAGE CONTROL


## PRESET SOUND SETTINGS (SOUND MODE)

Sound Mode lets you enjoy the best sound without any special adjustment as the TV sets the appropriate sound options based on the program content.

**Standard, Music, Cinema, Sport, and Game** are preset for optimum sound quality at the factory and are not adjustable.



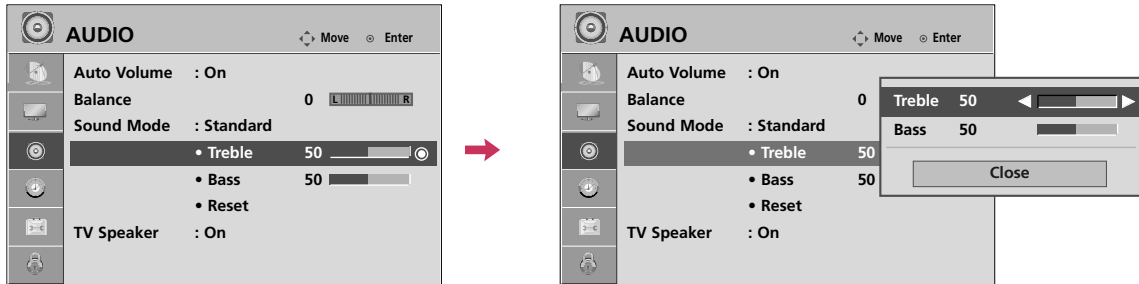
**1**  Select **Standard, Music, Cinema, Sport, or Game.**








**2**  Return to TV viewing.



# SOUND SETTING ADJUSTMENT - USER MODE

Adjust the sound to suit your taste and room situations.

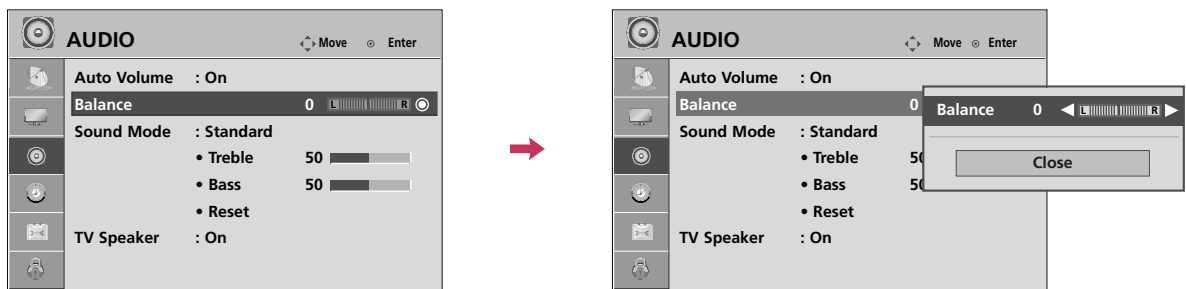










- 1   Select **AUDIO**.
- 2   Select **Sound Mode**.
- 3   Select **Standard, Music, Cinema, Sport, or Game**.
- 4   Select **Treble** or **Bass**.
- 5  Make appropriate adjustments.
- 6  Return to the previous menu.
-  Return to TV viewing.

# SOUND & LANGUAGE CONTROL

## BALANCE

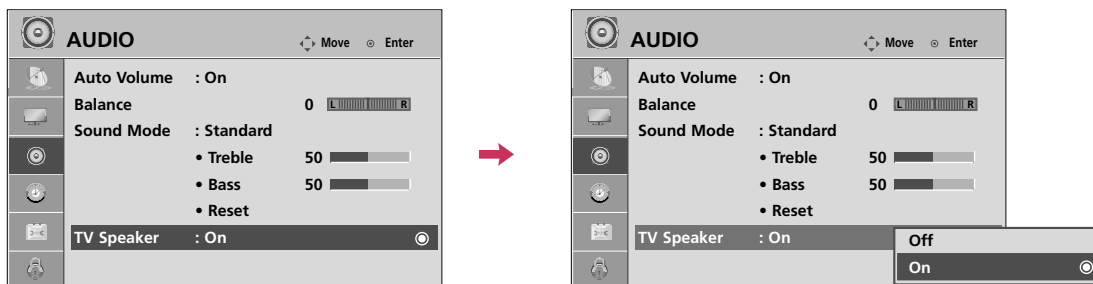
Adjust the left/right sound of speaker to suit your taste and room situations.











-   Select **AUDIO**.
-   Select **Balance**.
-   Make appropriate adjustments.
-  Return to the previous menu.
-  Return to TV viewing.

## TV SPEAKERS ON/OFF SETUP - Only 26LG3\*\*

Turn the TV speakers off if using external audio equipment.

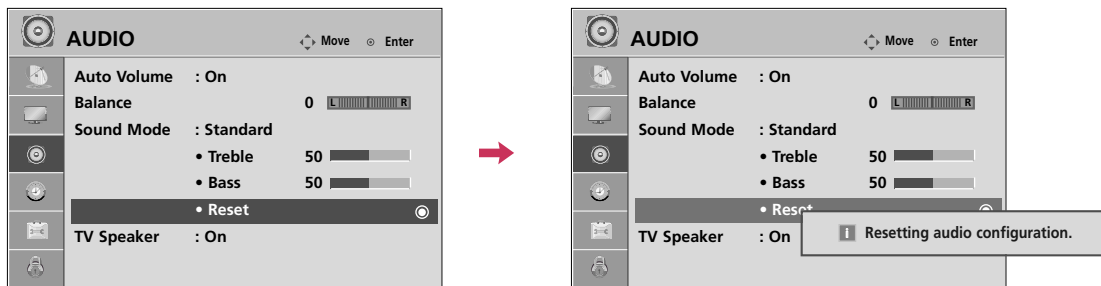








- 1   Select **AUDIO**.
- 2   Select **TV Speaker**.
- 3   Select **On** or **Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

# SOUND & LANGUAGE CONTROL

## AUDIO RESET

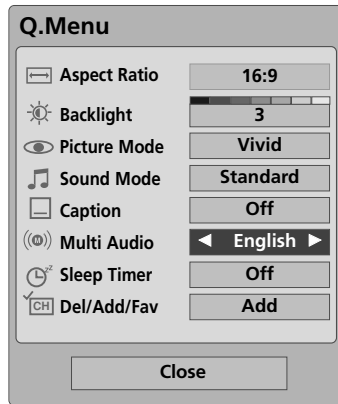
Settings of the selected Sound Mode return to the default factory settings.







-   Select **AUDIO**.
-   Select **Reset**.
-  Initialize the adjusted value.
-  Return to TV viewing.

## STEREO/SAP BROADCAST SETUP





For Analog only: This TV can receive MTS stereo programs and any SAP (Secondary Audio Program) that accompanies the stereo program if the station transmits an additional sound signal. Mono sound is automatically used if the broadcast is only in Mono.



### Analog TV

- 1   Select **SAP**.
- 2  Select **Mono, Stereo, or SAP**.
- 3  Return to TV viewing.

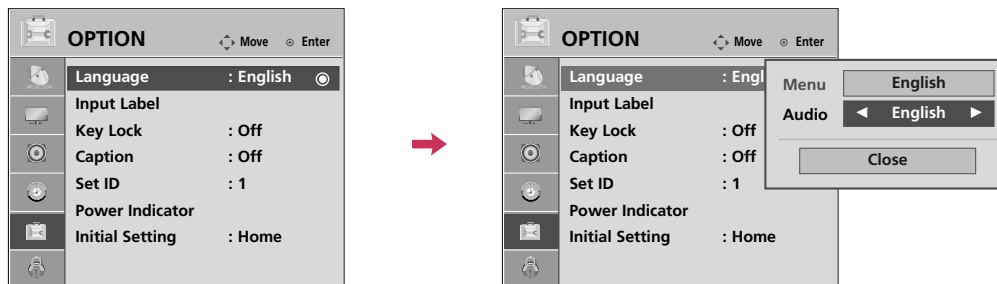
### Digital TV

- 1   Select **Multi Audio**.
- 2  Select other languages.
- 3  Return to TV viewing.

# SOUND & LANGUAGE CONTROL

## AUDIO LANGUAGE

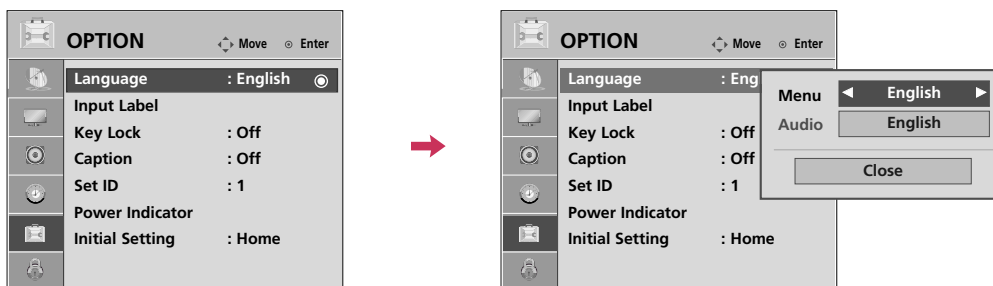
Other languages may be available if a digital signal is provided by the broadcasting station.  
This feature operates only in DTV/CADTV mode.

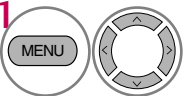
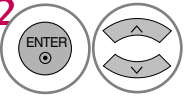
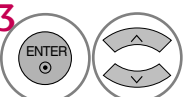





-  Select **OPTION**.
-  Select **Language**.
-  Select **Audio**.
-  Select your desired language:  
**English, Spanish, or French**
-  Return to the previous menu.
-  Return to TV viewing.

# ON-SCREEN MENUS LANGUAGE SELECTION

The menus can be shown on the screen in the selected language.

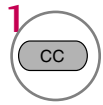


- 1  Select **OPTION**.
- 2  Select **Language**.
- 3  Select **Menu**.
- 4  Select your desired language.  
From this point on, the on-screen menus will be shown in the selected language.
- 5  Return to the previous menu.
-  Return to TV viewing.

# SOUND & LANGUAGE CONTROL

## CAPTION MODE

Caption must be provided to help people with hearing loss watch TV.

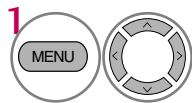
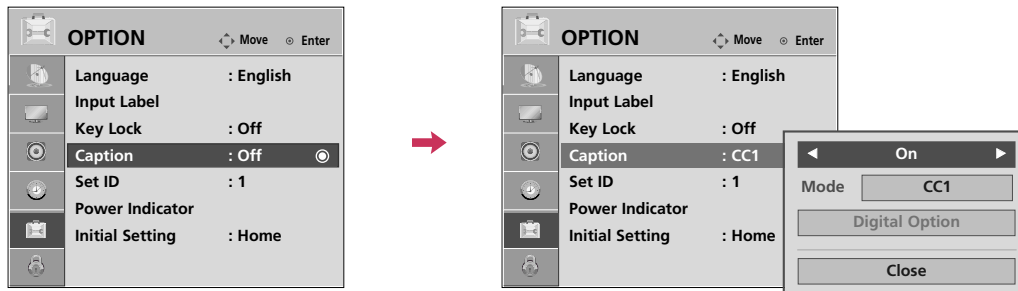


Select Caption **On** or **Off**.

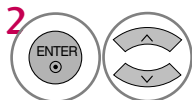
- When selecting **Off**, Sub-menus for Analog, DTV, and Digital Option become disabled.

## Analog Broadcasting System Captions

Caption must be provided to help people with hearing loss watch TV. Select a caption mode for displaying captioning information if provided on a program. Analog caption displays information at any position on the screen and is usually the program's dialog. Caption/Text, if provided by the broadcaster, would be available for both digital and analog channels on the Antenna/Cable. This TV is programmed to memorize the caption/text mode which was last set when you turned the power off. This function is only available when **Caption Mode** is set **On**.



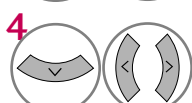
Select **OPTION**.



Select **Caption**



Select **On**.



Select **CC1-4** or **Text1-4**.



Return to the previous menu.



Return to TV viewing.

### ■ CAPTION

The term for the words that scroll across the bottom of the TV screen; usually the audio portion of the program provided for the hearing impaired.

### ■ TEXT

The term for the words that appear in a large black frame and almost cover the entire screen; usually messages provided by the broadcaster.

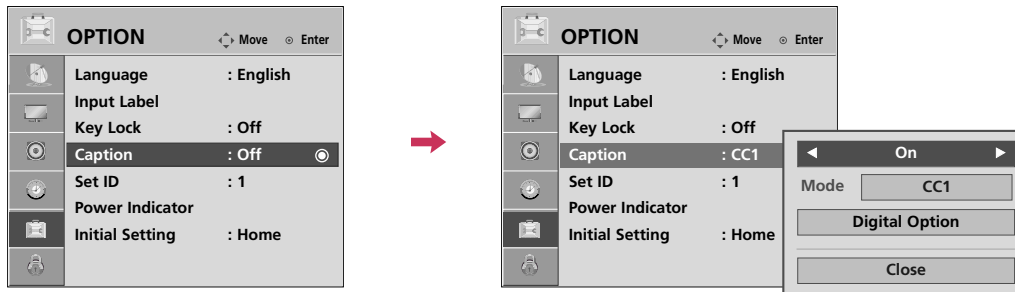












## Digital Broadcasting System Captions

Choose the language you want the DTV/CADTV Captions to appear in.

Other Languages can be chosen for digital sources only if they are included on the program.

This function is only available when **Caption Mode** is set **On**.

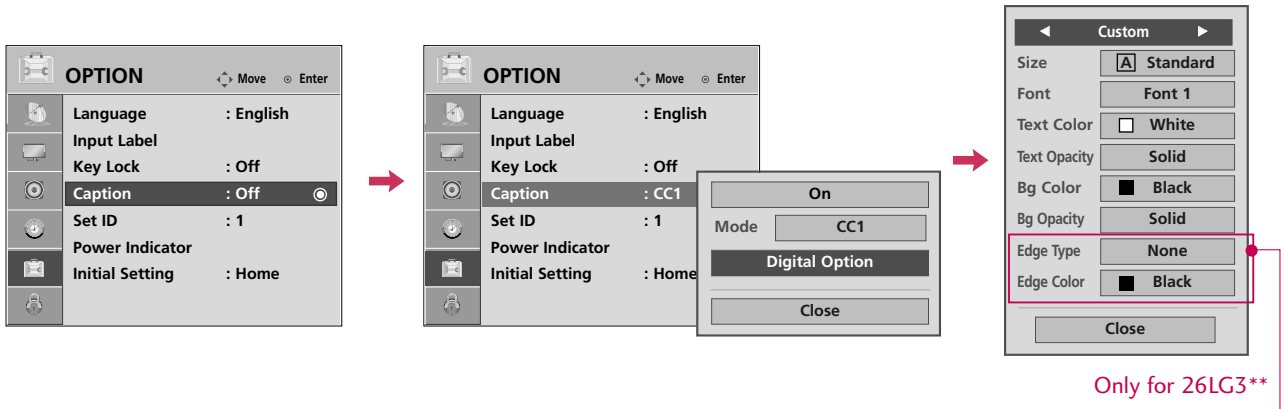
















- 1   Select **OPTION**.
- 2   Select **Caption**.
- 3   Select **On**.
- 4   Select **CC1-4, Text1-4, or Service1 - 6**.
- 5  Return to the previous menu.
-  Return to TV viewing.

# SOUND & LANGUAGE CONTROL

## Caption Option

Customize the DTV/CADTV captions that appear on your screen.  
This function is only available when **Caption Mode** is set **On**.



- 1   Select **OPTION**.
- 2   Select **Caption**.
- 3   Select **On**.
- 4   Select **Digital Option**.
- 5   Select **Custom**.
- 6   Customize the **Style, Font**, etc., to your preference. A preview icon is provided at the bottom of the screen, use it to see the caption language.
- 7  Return to the previous menu.
-  Return to TV viewing.

- **Size:** Set the word size.
- **Font:** Select a typeface for the text.
- **Text Color:** Choose a color for the text.
- **Text Opacity:** Specify the opacity for the text color.
- **Bg (Background) Color:** Select a background color.
- **Bg (Background) Opacity:** Select the opacity for the background color.
- **Edge Type:** Select an edge type.
- **Edge Color:** Select a color for the edges.

# TIME SETTING

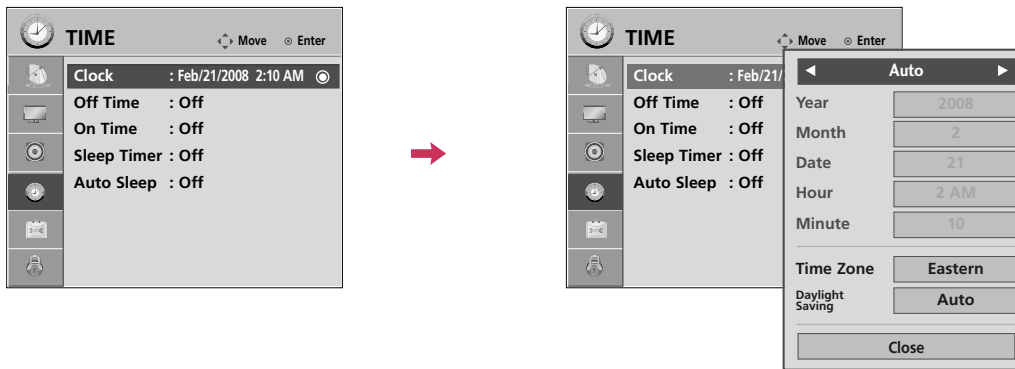
## CLOCK SETTING

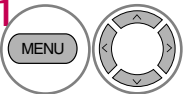
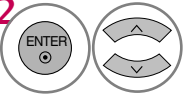
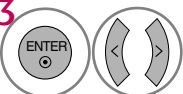
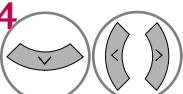
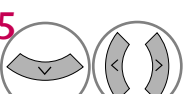


### Auto Clock Setup

The time is set automatically from a digital channel signal.

The digital channel signal includes information for the current time provided by the broadcasting station.

Set the clock manually if the current time is set incorrectly by the auto clock function.

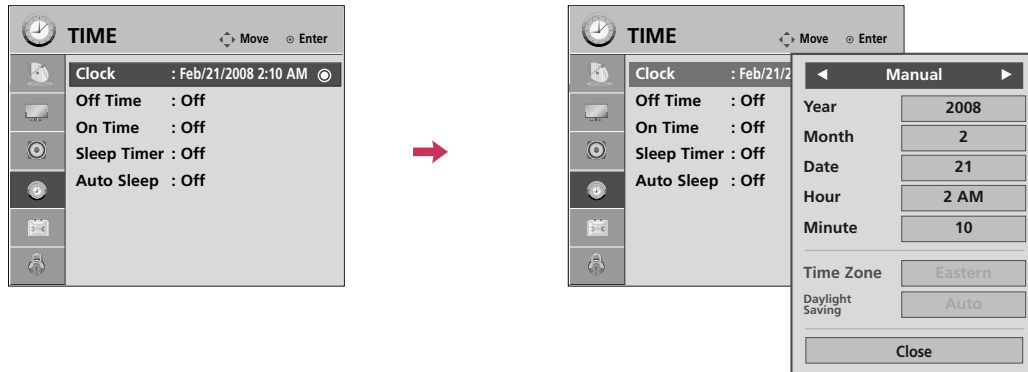












- 1  Select **TIME**.
- 2  Select **Clock**.
- 3  Select **Auto**.
- 4  Select your viewing area time zone.
  - U.S.A: **Eastern, Central, Mountain, Pacific, Alaska, or Hawaii.**
  - Canada: **Eastern, Central, Mountain, Pacific, New F.land, or Atlantic.**
- 5  Select **Auto, Off, or On** (depending on whether or not your viewing area observes Daylight Saving time).
- 6  Return to the previous menu.
-  Return to TV viewing.

# TIME SETTING

## Manual Clock Setup

If the current time setting is wrong, reset the clock manually.



-   Select **TIME**.
-   Select **Clock**.
-   Select **Manual**.
-  Select the Year, Month, Date, Hour, or Minutes option.
-  Set the Year, Month, Date, Hour, or Minutes option.
-  Return to the previous menu.
-  Return to TV viewing.

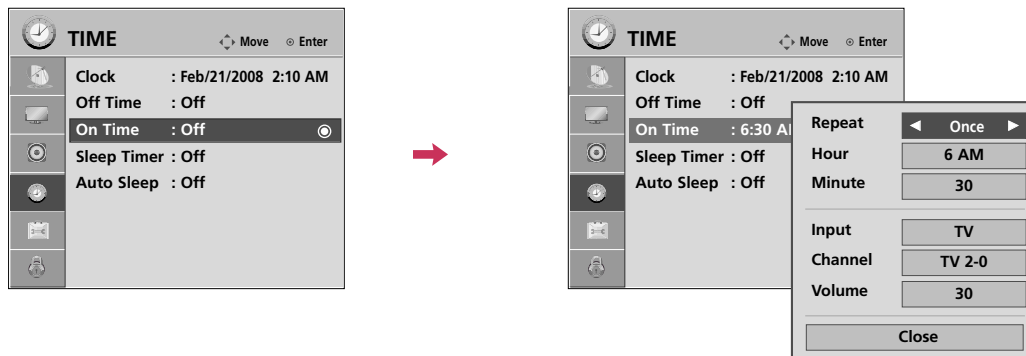
## AUTO ON/OFF TIME SETTING












This function operates only if the current time has been set.

The **Off Time** function overrides the **On Time** function if they are both set to the same time.









The TV must be in standby mode for the **On Time** to work.

If you do not press any button within 2 hours after the TV turns on with the **On Time** function, the TV will automatically revert to standby mode.



- 1   Select **TIME**.
- 2   Select **Off time** or **On time**.
- 3   Select **Repeat**.
- 4   Select **Off, Once, Everyday, Mon~Fri, Mon~Sat, Weekend, or Sunday**.
- 5   Select and set **Hour** or **Minute**.
- 6  Return to the previous menu.
-  Return to TV viewing.

- To cancel **On/Off Time** function, select **Off**.
- Only for **On Time** function

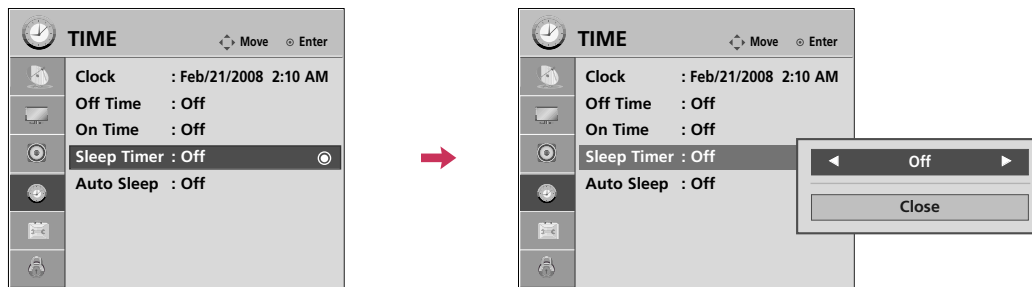
- 1   Select **Input**.
- 2   19/22LG3\*\*: Select **TV, AV, Component, RGB-PC, or HDMI**.  
26LG3\*\*: Select **TV, AV1-2, Component1-2, RGB-PC, or HDMI1-3**.
- 3   When Selecting **TV**: set the channel at turn-on.
- 4   Adjust to sound level at turn-on.


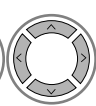

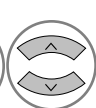

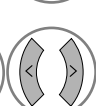

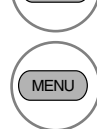
# TIME SETTING

## SLEEP TIMER SETTING

The Sleep Time turns the TV off at the preset time.

Note that this setting is cleared when the TV is turned off.

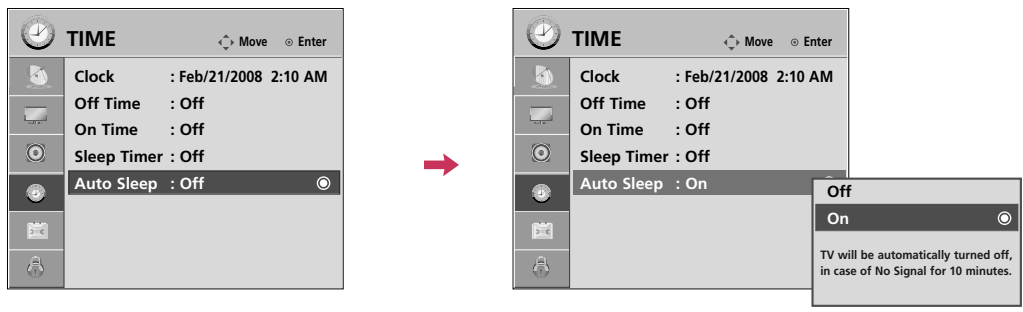










-   Select **TIME**.
-   Select **Sleep Timer**.
-   Select **Off, 10, 20, 30, 60, 90, 120, 180, or 240 minutes**.
-  Return to the previous menu.
-  Return to TV viewing.

■ You can also adjust **Sleep Timer** in the **Q.Menu**.

# AUTO SHUT-OFF SETTING

TV will be automatically turned off, in case of no signal for 10 minutes.



- 1   Select **TIME**.
- 2   Select **Auto Sleep**.
- 3   Select **On** or **Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

# PARENTAL CONTROL / RATINGS

Parental Control can be used to block specific channels, ratings and other viewing sources.

The Parental Control Function (V-Chip) is used to block program viewing based on the ratings sent by the broadcasting station. The default setting is to allow all programs to be viewed. Viewing can be blocked by choosing the type of the program and the categories. It is also possible to block all program viewing for a time period. To use this function, the following must be done :

1. Set ratings and categories to be blocked.
2. Specify a password
3. Enable the lock

## V-Chip rating and categories

Rating guidelines are provided by broadcasting stations. Most television programs and television movies can be blocked by TV Rating and/or Individual Categories. Movies that have been shown at the theaters or direct-to-video movies use the Movie Rating System (MPAA) only.

## Ratings for Television programs including made-for-TV movies:




- TV-G (General audience)
- TV-PG (Parental guidance suggested)
- TV-14 (Parents strongly cautioned)
- TV-MA (Mature audience only)
- TV-Y (All children)
- TV-Y7 (Children 7 years older)


## SET PASSWORD & LOCK SYSTEM

### Setting up Your Password

Set up blocking schemes to block specific channels, ratings, and external viewing sources. A password is required to gain access to this menu.



1    Select **LOCK**.

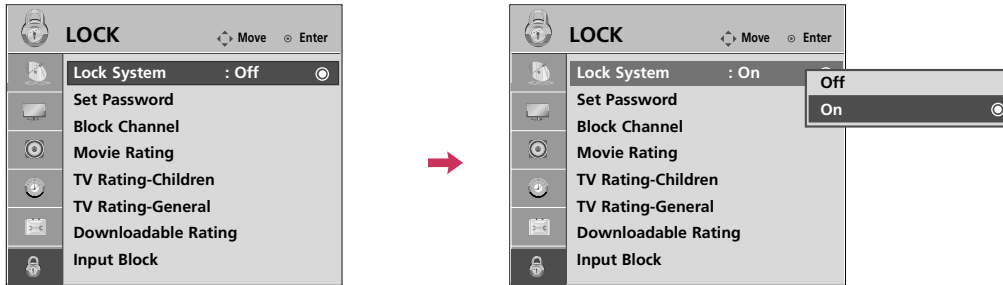
2  Input the password.




- Enter the password as requested.
- The TV is set up with the initial password "0-0-0-0".




## Lock System

Enables or disables the blocking scheme you set up previously.





1    Select **LOCK**.

2  Input the password.

3  Select **Lock System**.

4   Select **On** or **Off**.

5  Return to the previous menu.

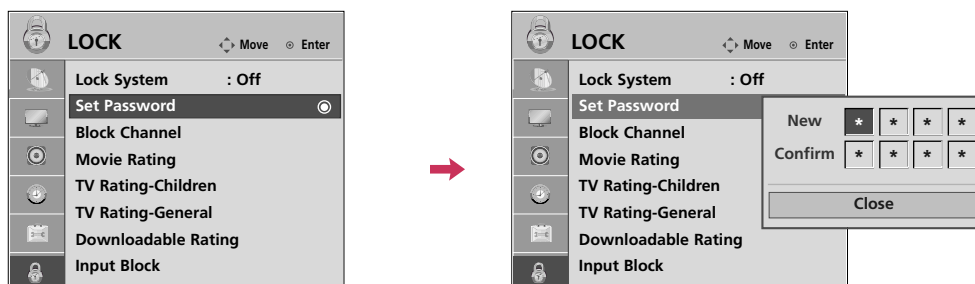
 Return to TV viewing.


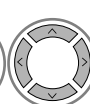

■ When you select **On**, the Lock System is enable.


# PARENTAL CONTROL / RATINGS

## Set Password



Change the password by inputting a new password twice.





1    Select **LOCK**.

2  Input the password.

3  Select **Set password**.

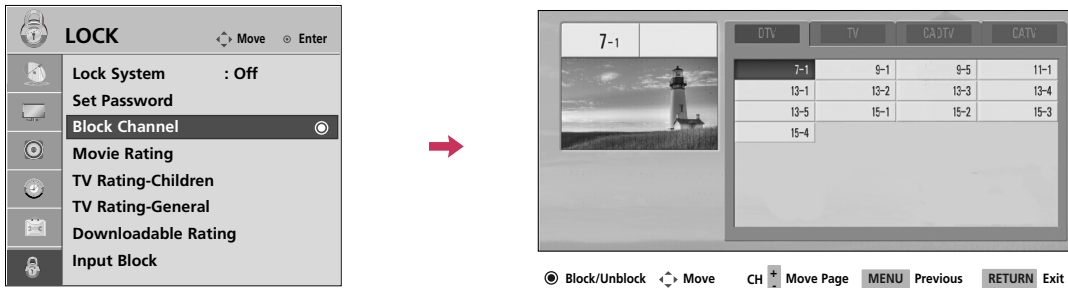
4   Choose any 4 digits for your new password.  
As soon as the 4 digits are entered, re-enter the same 4 digits on the **Confirm**.











5  Return to the previous menu.

 Return to TV viewing.

# CHANNEL BLOCKING

Blocks any channels that you do not want to watch or that you do not want your children to watch.



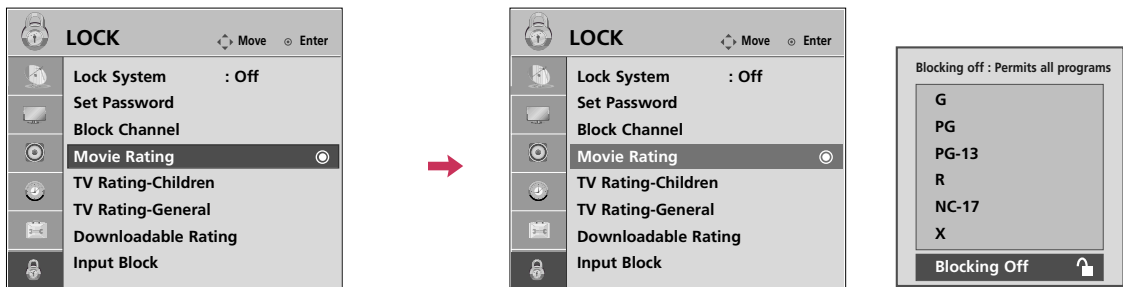
- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **Block Channel**.
- 4   Select a channel to block or unblock it.
- 5  Block or unblock a channel.
- 6  Return to the previous menu.
-  Return to TV viewing.




# PARENTAL CONTROL / RATINGS


## MOVIE & TV RATING

### Movie Rating (MPAA) - Only for USA

Blocks movies according to the movie ratings limits specified, so children cannot view certain movies. You can set the ratings limit by blocking out all the movies with the ratings above a specified level. Keep in mind that the movie ratings limit only applies to movies shown on TV, not TV programs, such as soap operas.





1    Select **LOCK**.

2  Input the password.

3  Select **Movie Rating**.

4   Select **G, PG, PG-13, R, NC-17 or X**.

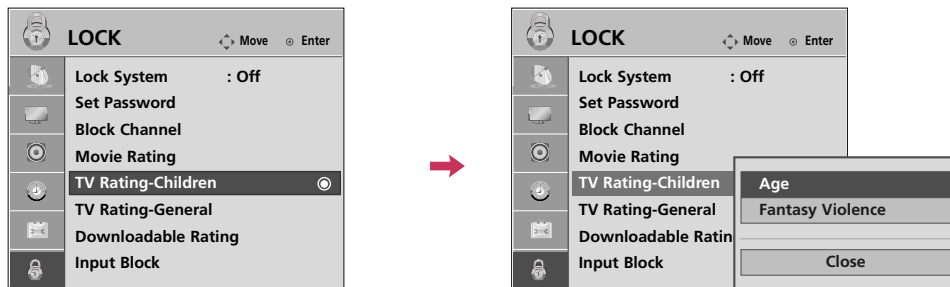
5  Return to the previous menu.




 Return to TV viewing.


- G (General audience)
- PG (Parental guidance suggested)
- PG-13 (Parents strongly cautioned)
- R (Restricted)
- NC-17 (No one 17 and under admitted)
- X (Adult only)
- Blocking Off (Permits all programs)
- ▶ If you set PG-13: G and PG movies will be available, PG-13, R, NC-17 and X will be blocked.

## TV Rating Children - Only for USA

Prevents children from watching certain children's TV programs, according to the ratings limit set. The children rating does not apply to other TV programs. Unless you block certain TV programs intended for mature audiences in the TV Rating - sub menu, your children can view those programs.




1    Select **LOCK**.


2  Input the password.

3  Select **TV Rating-Children**.

4   Select **Age** or **Fantasy Violence**.

5   Select block options.

6  Return to the previous menu.

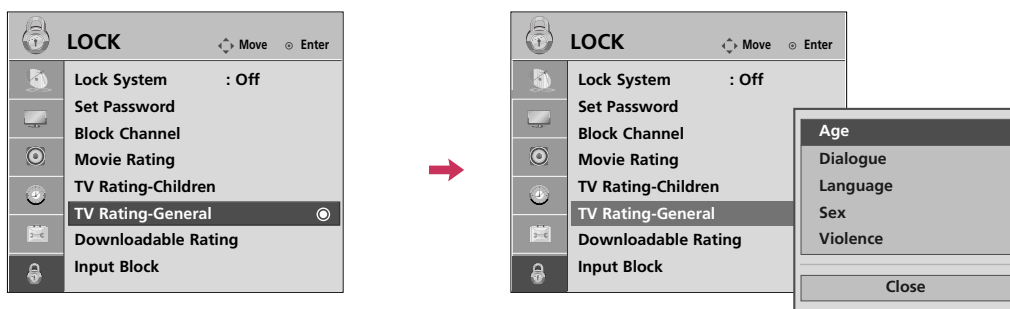
 Return to TV viewing.


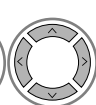

- Age (applies to TV-Y, TV-Y7)
- Fantasy Violence (applies to TV-Y7)


# PARENTAL CONTROL / RATINGS

## TV Rating General - Only for USA


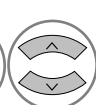
Based on the ratings, blocks certain TV programs that you and your family do not want to view.




1    Select **LOCK**.


2  Input the password.

3  Select **TV Rating-General**.

4   Select **Age, Dialogue, Language, Sex or Violence**.

5   Select block options.

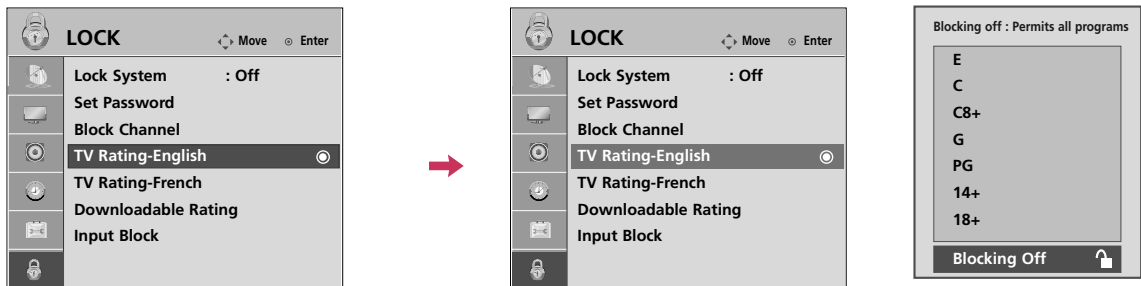
6  Return to the previous menu.




 Return to TV viewing.


- Age (applies to TV-G,TV-PG,TV-14,TV-MA).
- Dialogue-sexual dialogue (applies to TV-PG,TV-14).
- Language-adult language (applies to TV-PG, TV-14, TV-MA).
- Sex-sexual situations (applies to TV-PG, TV-14, TV-MA).
- Violence (applies to TV-PG, TV-14, TV-MA).

## TV Rating English - Only for CANADA



Selecting canadian english language rating system.





1    Select **LOCK**.

2  Input the password.

3  Select **TV Rating-English**.

4   Select **E, C, C8+, G, PG, 14+, 18+, or Blocking Off**.

5  Return to the previous menu.

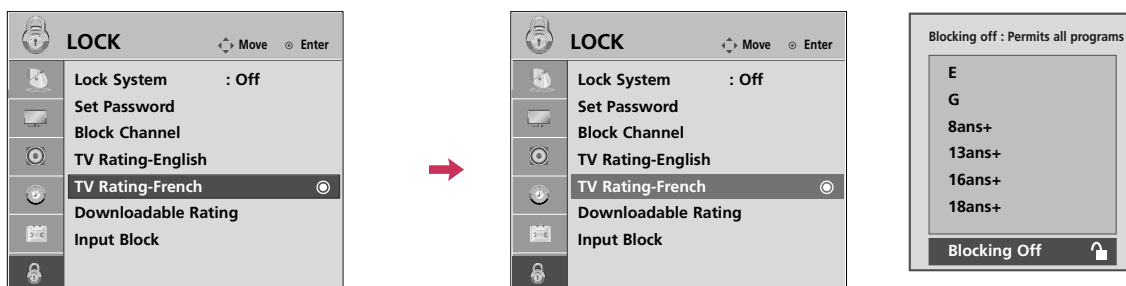
 Return to TV viewing.


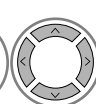
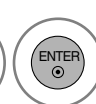
- E (Exempt)
- C (Children)
- C8+ (Children eight years and older)
- G (General programming, suitable for all audiences)
- PG (Parental Guidance)
- 14+ (Viewers 14 years and older)
- 18+ (Adult programming)
- Blocking Off (Permits all programs)


# PARENTAL CONTROL / RATINGS

## TV Rating French - *Only for CANADA*


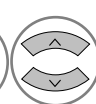
Selecting canadian french language rating system.





1    Select **LOCK**.

2  Input the password.

3  Select **TV Rating-French**.

4   Select **E, G, 8ans+, 13ans+, 16ans+, 18ans+, or Blocking off**.

5  Return to the previous menu.

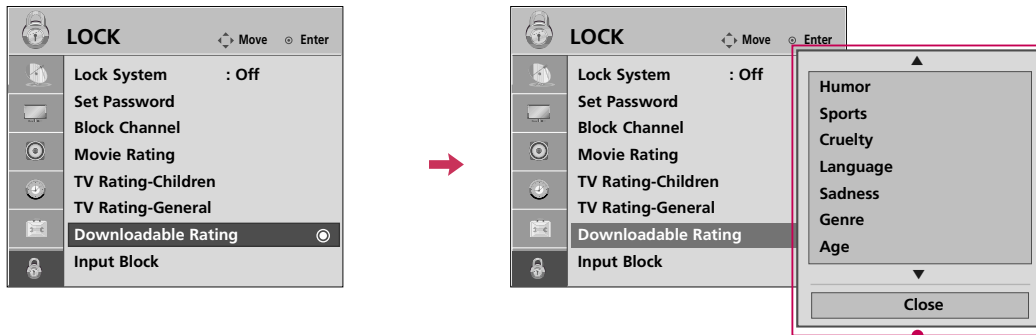
 Return to TV viewing.

- E (Exempt)
- G (General)
- 8ans+ (General-Not convenient for little children)
- 13ans+ (Not convenient for children of 13 years and younger)
- 16ans+ (Not convenient for children of 16 years and younger)
- 18ans+ (This programs is only for adults)
- Blocking off (Permits all programs)














# DOWNLOADABLE RATING

This function may become available in the future and will be available only for digital channel signal. This function operates only when TV has received Region5 Rating data.



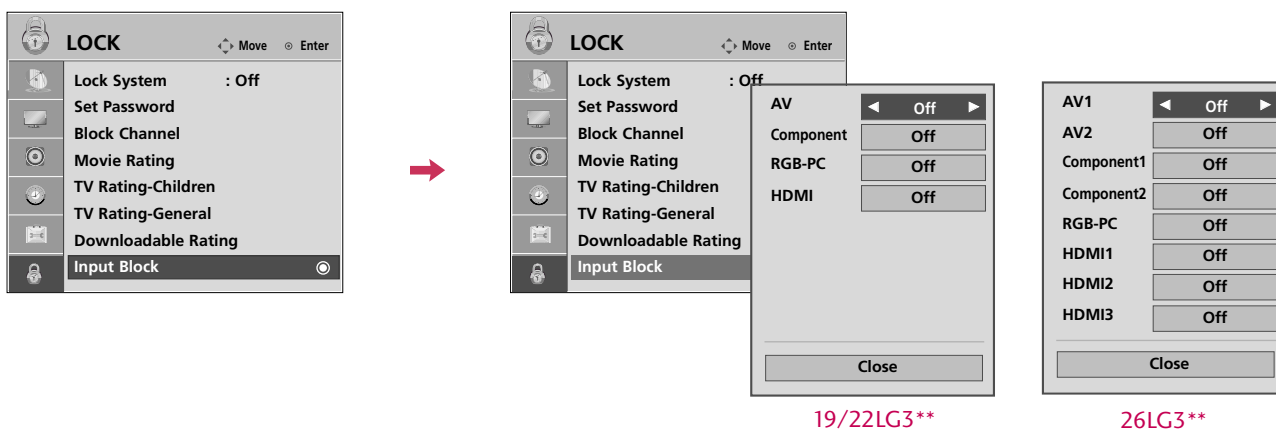
■ Based on rating table, your TV's OSD (On Screen Display) may differ slightly from what is shown in this manual.










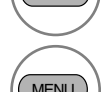
- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **Downloadable Rating**.
- 4   Select desired **Downloadable Rating** option.
- 5   Select desired option and block it.
- 6  Return to the previous menu.
-  Return to TV viewing.

# PARENTAL CONTROL / RATINGS

## EXTERNAL INPUT BLOCKING

Enables you to block an input.



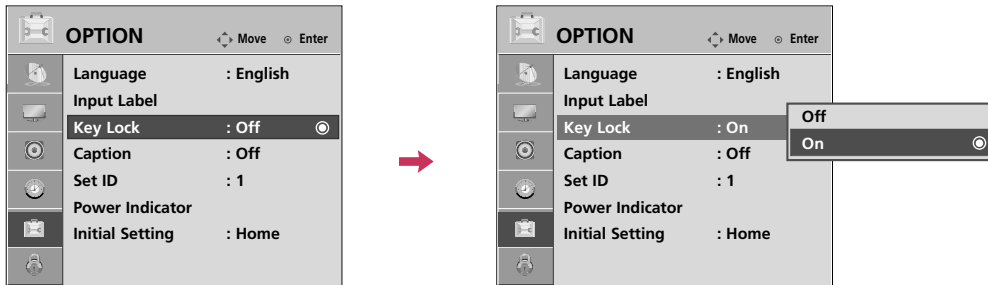
-    Select **LOCK**.
-  Input the password.
-  Select **Input Block**.
-   Select input source.
-  Select **On** or **Off**.
-  Return to the previous menu.
-  Return to TV viewing.









# KEY LOCK

The TV can be set up so that it can only be used with the remote control.

This feature can be used to prevent unauthorized viewing by locking out the front panel controls.

This TV is programmed to remember which option it was last set to even if you turn the TV off.



- 1   Select **OPTION**.
- 2   Select **Key Lock**.
- 3   Select **On** or **Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

- In **Key Lock 'On'**, if the TV is turned off, press the  $\phi$  / I, **INPUT**, **CH (+ or -)** button on the TV or **POWER**, **INPUT**, **CH(+ or -)** or **NUMBER** buttons on the remote control.
- With the **Key Lock On**, the display **'⚠ Key Lock'** appears on the screen if any button on the front panel is pressed while viewing the TV.

# APPENDIX

## TROUBLESHOOTING

### The operation does not work normally.

The remote control doesn't work

- Check to see if there is any object between the product and the remote control causing obstruction. Ensure you are pointing the remote control directly at the TV.
- Ensure that the batteries are installed with correct polarity (+ to +, - to -).
- Ensure that the correct remote operating mode is set: TV, VCR etc.
- Install new batteries.

Power is suddenly turned off

- Is the sleep timer set?
- Check the power control settings. Power interrupted.

### The video function does not work.

No picture & No sound

- Check whether the product is turned on.
- Try another channel. The problem may be with the broadcast.
- Is the power cord inserted into wall power outlet?
- Check your antenna direction and/or location.
- Test the wall power outlet, plug another product's power cord into the outlet where the product's power cord was plugged in.

Picture appears slowly after switching on

- This is normal, the image is muted during the product startup process. Please contact your service center, if the picture has not appeared after five minutes.

No or poor color or poor picture

- Adjust Color in menu option.
- Keep a sufficient distance between the product and the VCR.
- Try another channel. The problem may be with the broadcast.
- Are the video cables installed properly?
- Activate any function to restore the brightness of the picture.

Horizontal/vertical bars or picture shaking

- Check for local interference such as an electrical appliance or power tool.

Poor reception on some channels

- Station or cable product experiencing problems, tune to another station.
- Station signal is weak, reorient antenna to receive weaker station.
- Check for sources of possible interference.

Lines or streaks in pictures

- Check antenna (Change the direction of the antenna).

No picture when connecting HDMI

- Check HDMI cable over version 1.3.  
The HDMI cables don't support HDMI version 1.3, it cause flickers or no screen display. In this case use the latest cables that support HDMI version 1.3.

### The audio function does not work.

Picture OK & No sound	<ul style="list-style-type: none"><li>■ Press the VOL or VOLUME button.</li><li>■ Sound muted? Press MUTE button.</li><li>■ Try another channel. The problem may be with the broadcast.</li><li>■ Are the audio cables installed properly?</li></ul>
No output from one of the speakers	<ul style="list-style-type: none"><li>■ Adjust Balance in menu option.</li></ul>
Unusual sound from inside the product	<ul style="list-style-type: none"><li>■ A change in ambient humidity or temperature may result in an unusual noise when the product is turned on or off and does not indicate a fault with the product.</li></ul>
No sound when connecting HDMI or USB	<ul style="list-style-type: none"><li>■ Check HDMI cable over version 1.3.</li><li>■ Check USB cable over version 2.0.</li><li>■ Use normal MP3 file.</li></ul>

\*This feature is not available for all models.

### There is a problem in PC mode. (Only PC mode applied)

The signal is out of range	<ul style="list-style-type: none"><li>■ Adjust resolution, horizontal frequency, or vertical frequency.</li><li>■ Check the input source.</li></ul>
Vertical bar or stripe on background & Horizontal Noise & Incorrect position	<ul style="list-style-type: none"><li>■ Work the Auto configure or adjust clock, phase, or H/V position. (Option)</li></ul>
Screen color is unstable or single color	<ul style="list-style-type: none"><li>■ Check the signal cable.</li><li>■ Reinstall the PC video card.</li></ul>

# APPENDIX

## MAINTENANCE

Early malfunctions can be prevented. Careful and regular cleaning can extend the amount of time you can enjoy your new TV.

**Caution:** Be sure to turn the power off and unplug the power cord before you begin any cleaning.

### Cleaning the Screen

- 1 Here's a great way to keep the dust off your screen for a while. Wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dish washing detergent. Wring the cloth until it's almost dry, and then use it to wipe the screen.
- 2 Make sure the excess water is off the screen, and then let it air-dry before you turn on your TV.

### Cleaning the Cabinet

- To remove dirt or dust, wipe the cabinet with a soft, dry, lint-free cloth.
- Please be sure not to use a wet cloth.

### Extended Absence

#### CAUTION

- ▶ If you expect to leave your TV dormant for a long time (such as a vacation), it's a good idea to unplug the power cord to protect against possible damage from lightning or power surges.

# PRODUCT SPECIFICATIONS

MODELS		19LG30 (19LG30-UA) 19LG31 (19LG31-UB)	22LG30 (22LG30-UA) 22LG31 (22LG31-UB) 22LG30DC (22LG30DC-UA)	26LG30 (26LG30-UA/UD) 26LG30DC (26LG30DC-UA)
Dimensions (Width x Height x Depth)	With stand	18.0 x 15.3 x 7.4 inches 458.8 x 391.0 x 189.2 mm	20.5 x 16.9 x 7.4 inches 522.2 x 431.5 x 189.2 mm	26.1 x 20.0 x 8.9 inches 663.3 x 508.2 x 227.3 mm
	Without stand	18.0 x 13.5 x 3.3 inches 458.8 x 344.5 x 85.4 mm	20.5 x 15.1 x 3.3 inches 522.2 x 384.2 x 84.2 mm	26.1 x 17.6 x 3.1 inches 663.3 x 449.8 x 80.0 mm
Weight	With stand	11.0 pounds / 5.0 kg	12.3 pounds / 5.6 kg	22.2 pounds / 10.1 kg
	Without stand	10.3 pounds / 4.7 kg	11.6 pounds / 5.3 kg	18.9 pounds / 8.6 kg
Power requirement Television System Program Coverage External Antenna Impedance		AC100-240V ~ 50/60Hz NTSC-M, ATSC, 64 & 256 QAM VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135 75 ohm		
Environment condition	Operating Temperature Operating Humidity	32 ~ 104°F (0 ~ 40°C) Less than 80%		
	Storage Temperature Storage Humidity	-4 ~ 140°F (-20 ~ 60°C) Less than 85%		

- The specifications shown above may be changed without prior notice for quality improvement.

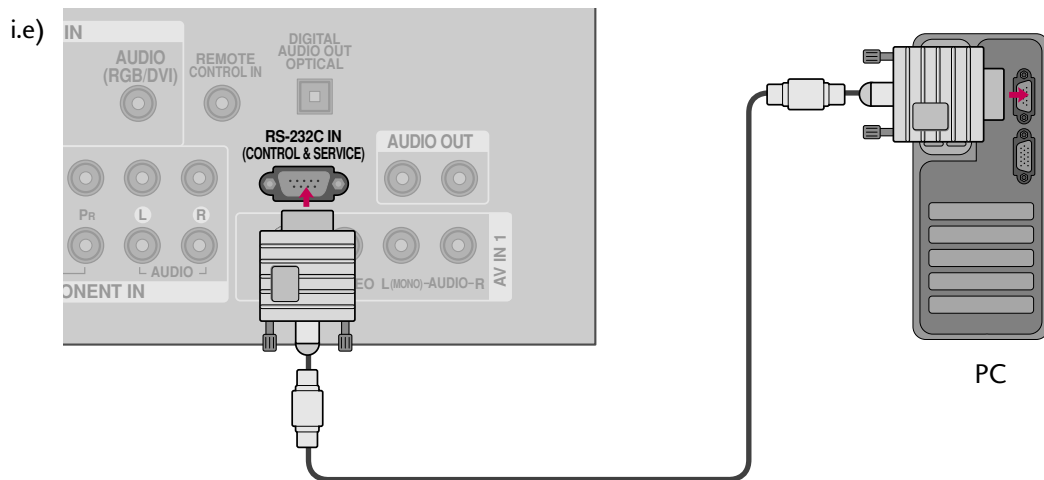
## EXTERNAL CONTROL THROUGH RS-232C

- Only 26LG30/30DC, 22LG30DC

The RS-232C port allows you connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) to control the TV's functions externally.

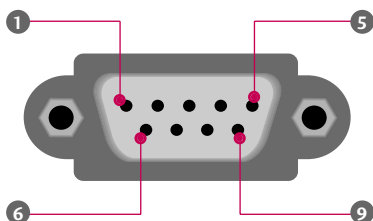
- Note: RS-232C on this unit is intended to be used with third party RS-232C control hardware and software. The instructions below are provided to help with programming software or to test functionality using telenet software.

### RS-232C Setup



### Type of Connector; D-Sub 9-Pin Male

No.	Pin Name
1	No connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection



### Communication Parameters

- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code
- Use a crossed (reverse) cable.

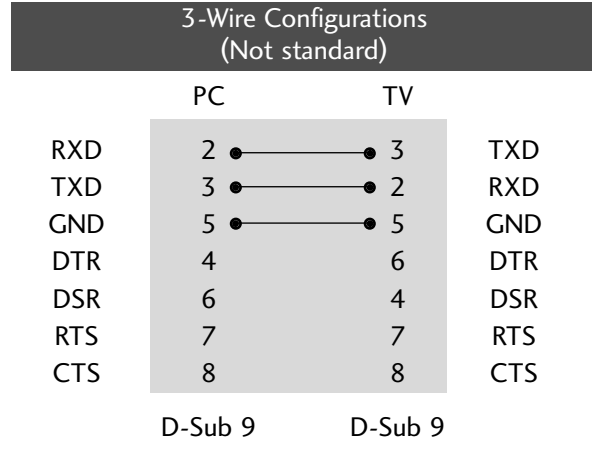
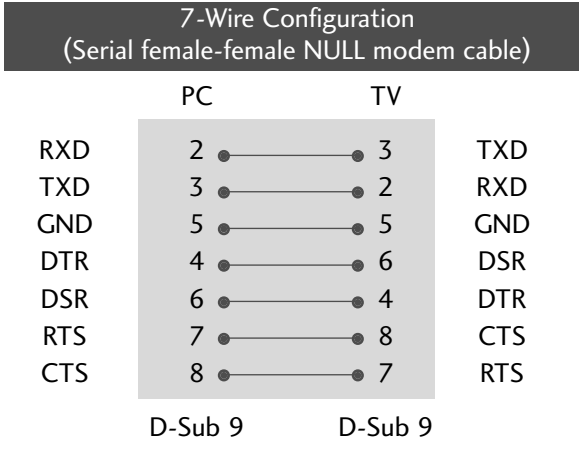
#### ! NOTE

- ▶ This product has command echo back in the RS-232C Command.



## RS-232C Configurations

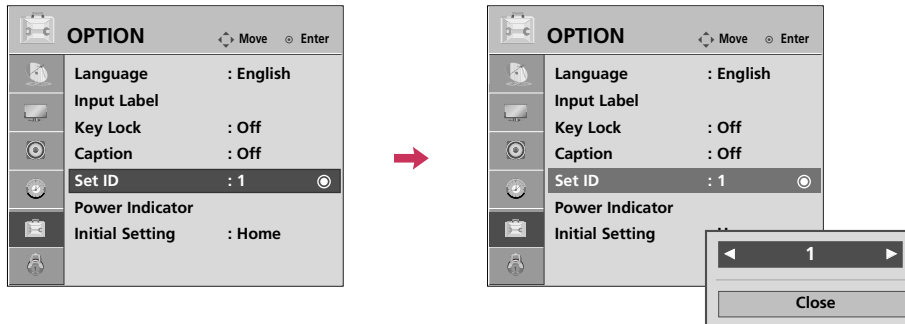
Either cable below can be used.



## Set ID

Use this function to specify a TV ID number.

Refer to 'Real Data Mapping1'. ► p.98.



- 1 Select **OPTION**.
- 2 Select **Set ID**.
- 3 Choose the desired TV ID number.  
The adjustment range of Set ID is 1 ~ 99.
- 4 Return to the previous menu.
- Return to TV viewing

## Command Reference List

	COMMAND1	COMMAND2	DATA (Hexadecimal)		COMMAND1	COMMAND2	DATA (Hexadecimal)
01. Power	k	a	00 ~ 01	14. Treble	k	r	00 ~ 64
02. Input Select	x	b	(▶ p.97)	15. Bass	k	s	00 ~ 64
03. Aspect Ratio	k	c	(▶ p.97)	16. Balance	k	t	00 ~ 64
04. Screen Mute	k	d	00 ~ 01	17. Color Temperature	k	u	00 ~ 02
05. Volume Mute	k	e	00 ~ 01	18. Auto Configuration	j	u	(▶ p.98)
06. Volume Control	k	f	00 ~ 64	20. Channel Add/Del	m	b	00 ~ 01
07. Contrast	k	g	00 ~ 64	21. Key	m	c	(▶ p.99)
08. Brightness	k	h	00 ~ 64	22. Backlight	m	g	00 ~ 64
09. Color	k	i	00 ~ 64				
10. Tint	k	j	00 ~ 64				
11. Sharpness	k	k	00 ~ 64				
12. OSD Select	k	l	00 ~ 01				
13. Remote Control Lock Mode	k	m	00 ~ 01				

	COMMAND1	COMMAND2	DATA00 (Hexadecimal)	DATA01 (Hexadecimal)	DATA02 (Hexadecimal)	DATA03 (Hexadecimal)	DATA04 (Hexadecimal)	DATA05 (Hexadecimal)
19. Channel Tuning	m	a	physical program high	major program low	major low	minor high	minor low	attribute

## Transmission / Receiving Protocol

### Transmission

**[Command1][Command2][ ][Set ID][ ][Data][Cr]**

[Command 1] : First command to control the set. (j, k, m or x)

[Command 2] : Second command to control the set.

[Set ID] : You can adjust the set ID to choose desired TV ID number in Setup menu. Adjustment range is 1 ~ 99. When selecting Set ID '0', every connected the TV is controlled. Set ID is indicated as decimal (1 ~ 99) on menu and as Hexa decimal (0x0 ~ 0x63) on transmission /receiving protocol.

[DATA] : To transmit the command data.

Transmit the 'FF' data to read status of command.

[Cr] : Carriage Return

ASCII code '0x0D'

[ ] : ASCII code 'space (0x20)'

\* In this model, TV will not send the status during the standby mode.

### OK Acknowledgement

**[Command2][ ][Set ID][ ][OK][Data][x]**

The TV transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is data read mode, it indicates present status data. If the data is data write mode, it returns the data of the PC computer.

\* In this model, TV will not send the status during the standby mode.

\* Data Format

[Command 2] : Use as command.

[Set ID] : Use the small character, if set ID is 10, it will send the '0', 'a'.

[DATA] : Use the small character, if data is 0 x ab, it will send the 'a', 'b'.

[OK] : Use the large character.

### Error Acknowledgement

**[Command2][ ][Set ID][ ][NG][Data][x]**

The TV transmits ACK (acknowledgement) based on this format when receiving abnormal data from non-viable functions or communication errors.

Data1: Illegal Code

Data2: Not supported function

Data3: Wait more time

\* In this model, TV will not send the status during the standby mode.

\* Data Format

[Command 2] : Use as command.

[Set ID] : Use the small character, if set ID is 10, it will send the '0', 'a'.

[DATA] : Use the small character, if data is 0 x ab, it will send the 'a', 'b'.

[NG] : Use the large character

**01. Power (Command: k a)**

To control Power On/Off of the TV.

**Transmission** [k][a][ ][Set ID][ ][Data][Cr]

Data 00: Power Off      Data 01: Power On

**Acknowledgement** [a][ ][Set ID][ ][OK/NG][Data][x]

\* In a like manner, if other functions transmit 'FF' data based on this format, Acknowledgement data feedback presents status about each function.

\* Note: In this model, TV will send the Acknowledge after power on processing completion.

There might be a time delay between command and acknowledge.

**02. Input Select (Command: x b)**

To select input source for TV.

**Transmission** [x][b][ ][Set ID][ ][Data][Cr]

Data 00: DTV (Antenna)      Data 01: DTV (Cable)

Data 10: Analog (Antenna)      Data 11: Analog (Cable)

Data 20: AV/AV1      Data 21: AV2

Data 40: Component/ Component1      Data 41: Component 2

Data 60: RGB-PC      Data 90: HDMI/HDMI1

Data 91: HDMI2      Data 92: HDMI3

**Acknowledgement** [b][ ][Set ID][ ][OK/NG][Data][x]

\* Data21, 41, 91, 92 : Except 22LG30DC

**03. Aspect Ratio (Command: k c)**

To adjust the screen format.

**Transmission** [k][c][ ][Set ID][ ][Data][Cr]

Data 01: 4:3      06: Set by program

02: 16:9      08: Full (Only 22LG3DC)

04: Zoom 1      09: Just scan

05: Zoom 2      ⋮

Reserved

**Acknowledgement** [c][ ][Set ID][ ][OK/NG][Data][x]

**04. Screen Mute (Command: k d)**

To select screen mute on/off.

**Transmission** [k][d][ ][Set ID][ ][Data][Cr]

Data 00: Screen mute off (Picture on)

Data 01: Screen mute on (Picture off)

**Acknowledgement** [d][ ][Set ID][ ][OK/NG][Data][x]

**05. Volume Mute (Command: k e)**

To control volume mute on/off.

You can also adjust mute using the MUTE button on remote control.

**Transmission** [k][e][ ][Set ID][ ][Data][Cr]

Data 00: Volume mute on (Volume off)

Data 01: Volume mute off (Volume on)

**Acknowledgement** [e][ ][Set ID][ ][OK/NG][Data][x]

**06. Volume Control (Command: k f)**

To adjust volume.

You can also adjust volume with the volume buttons on remote control.

**Transmission** [k][f][ ][Set ID][ ][Data][Cr]

Data Min: 00 ~ Max: 64 (\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping'. See page 98.

**Acknowledgement** [f][ ][Set ID][ ][OK/NG][Data][x]

**07. Contrast (Command: k g)**

To adjust screen contrast.

You can also adjust contrast in the PICTURE menu.

**Transmission** [k][g][ ][Set ID][ ][Data][Cr]

Data Min: 00 ~ Max: 64 (\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping'. See page 98.

**Acknowledgement** [g][ ][Set ID][ ][OK/NG][Data][x]

**08. Brightness (Command: k h)**

To adjust screen brightness.

You can also adjust brightness in the PICTURE menu.

**Transmission** [k][h][ ][Set ID][ ][Data][Cr]

Data Min: 00 ~ Max: 64 (\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping'. See page 98.

**Acknowledgement** [h][ ][Set ID][ ][OK/NG][Data][x]

**09. Color (Command: k i)**

To adjust screen color.

You can also adjust color in the PICTURE menu.

**Transmission** [k][i][ ][Set ID][ ][Data][Cr]

Data Min: 00 ~ Max: 64 (\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping'. See page 98.

**Acknowledgement** [i][ ][Set ID][ ][OK/NG][Data][x]

**10. Tint (Command: k j)**

To adjust screen tint.

You can also adjust tint in the PICTURE menu.

**Transmission** [k][j][ ][Set ID][ ][Data][Cr]

Data Red: 00 ~ Green: 64 (\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping'. See page 98.

**Acknowledgement** [j][ ][Set ID][ ][OK/NG][Data][x]

**11. Sharpness (Command: k k)**

To adjust screen sharpness.

You can also adjust sharpness in the PICTURE menu.

**Transmission** [k][k][ ][Set ID][ ][Data][Cr]

Data Min: 00 ~ Max: 64 (\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping'. See page 98.

**Acknowledgement** [k][ ][Set ID][ ][OK/NG][Data][x]

## 12. OSD Select (Command: k l)

To select OSD (On Screen Display) on/off.

**Transmission** [k][l][ ][Set ID][ ][Data][Cr]

Data 00: OSD off                      Data 01: OSD on

**Acknowledgement** [l][ ][Set ID][ ][OK/NG][Data][x]

## 13. Remote Control Lock Mode (Command: k m)

To lock the remote control and the front panel controls on the set.

**Transmission** [k][m][ ][Set ID][ ][Data][Cr]

Data 00: Lock off                      Data 01: Lock on

**Acknowledgement** [m][ ][Set ID][ ][OK/NG][Data][x]

If you're not using the remote control and front panel controls on the TV, use this mode. When main power is on/off, remote control lock is released.

## 14. Treble (Command: k r)

To adjust treble.

You can also adjust treble in the AUDIO menu.

**Transmission** [k][r][ ][Set ID][ ][Data][Cr]

Data Min: 00 ~ Max: 64 (\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping' as shown.

**Acknowledgement** [r][ ][Set ID][ ][OK/NG][Data][x]

## 15. Bass (Command: k s)

To adjust bass.

You can also adjust bass in the AUDIO menu.

**Transmission** [k][s][ ][Set ID][ ][Data][Cr]

Data Min: 00 ~ Max: 64 (\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping' as shown.

**Acknowledgement** [s][ ][Set ID][ ][OK/NG][Data][x]

## 16. Balance (Command: k t)

To adjust balance.

You can also adjust balance in the AUDIO menu.

**Transmission** [k][t][ ][Set ID][ ][Data][Cr]

Data Min: 00 ~ Max: 64 (\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping' as shown.

**Acknowledgement** [t][ ][Set ID][ ][OK/NG][Data][x]

## 17. Color Temperature (Command: k u)

To adjust color temperature.

You can also adjust color temperature in the PICTURE menu.

**Transmission** [k][u][ ][Set ID][ ][Data][Cr]

Data 00: Medium    01: Cool    02: Warm

**Acknowledgement** [u][ ][Set ID][ ][OK/NG][Data][x]

## 18. Auto Configuration (Command: j u)

To adjust picture position and minimize image shaking automatically. Auto configuration only works in RGB-PC mode.

**Transmission** [j][u][ ][Set ID][ ][Data][Cr]

Data 01: To set

**Acknowledgement** [u][ ][Set ID][ ][OK/NG][Data][x]

\*Real data mapping

0 : Step 0

⋮

A : Step 10 (SET ID 10)

⋮

F : Step 15 (SET ID 15)

10 : Step 16 (SET ID 16)

⋮

63 : Step 99 (SET ID 99)

64 : Step 100

## 19. Channel Tuning (Command: m a)

To tune channel to following physical/major/minor number.

**Transmission** [m][a][ ][Set ID][ ][Data00][ ][Data01][ ][Data02][ ][Data03][ ][Data04][ ][Data05][Cr]

Digital channels have a Physical, Major, and Minor channel number. The Physical number is the actual digital channel number, the Major is the number that the channel should be mapped to, and the Minor is the sub-channel. Since the ATSC tuner automatically maps the channel to the Major number, the Physical number is not required when sending a command.

Data 00: Physical Channel Number

NTSC air: 02~45, NTSC cable: 01, 0E~7D

ATSC air: 01~45, ATSC cable: 01~87

Data 01 & 02: Major Channel Number

Data 01: High byte

Data 02: Low byte

Two bytes are available for the Major and Minor, normally only the second byte is used.

Data 03 & 04: Minor Channel Number

Not needed for NTSC.

Data5:

7	Main/Sub Picture	6	Two/One Part Channel	5	Using Physical Channel	4	Reserved	3	2	1	0	Step
0	Main	0	Two	0	Use	x		0	0	0	0	NTSC Air
1	Sub	1	One	1	No Use	x		0	0	0	1	NTSC Cable
						x		0	0	1	0	ATSC Air
						x		0	0	1	1	ATSC Cable_std
						x		0	1	0	0	ATSC Cable_hrc
						x		0	1	0	1	ATSC Cable_irc
						x		0	1	1	0	ATSC cable_auto
						x		0	1	1	1	Reserved
						x		x	x	x	x	...
						x		1	1	1	1	Reserved

The table above lists the binary code which must be converted to Hexadecimal before sending. For example: The binary code to tune the sub source to an NTSC cable channel is "1000 0001", which translates to "81" in Hex.

- \* 7th bit : For which source do you want to change the channel.
- \* 6th bit: Use a two part or one part channel. Most cases just use 0 since it's ignored when using NTSC.
- \* 5th bit: Use 0 with NTSC since it can only use the physical channel number. Normally use 1 for ATSC since most times it doesn't matter what the physical number is.
- \* 4th bit: Set to 0.
- \* 3-0 bits: Choose signal type.

\* Tune Command Examples:

1. Tune to the analog (NTSC) cable channel 35.

Data 00 = Physical of 35 = 23  
 Data 01 & 02 = No Major = 00 00  
 Data 03 & 04 = No Minor = 00 00  
 Data 05 = 0000 0001 in binary = 01  
 Total = ma 00 23 00 00 00 00 01

2. Tune to the digital (ATSC) local channel 30-3.

Data 00 = Don't know Physical = 00  
 Data 01 & 02 = Major is 30 = 00 1E  
 Data 03 & 04 = Minor is 3 = 00 03  
 Data 05 = 0010 0010 in binary = 22  
 Total = ma 00 00 00 1E 00 03 22

```
Acknowledgement[a][ ][Set ID][ ][OK][Data00][Data01][Data02][Data03][Data04][x][a][ ][Set ID][ ][NG][Data00][x]
```

## 20. Channel Add/Del (Command: m b)

To add and delete the channels.

```
Transmission [m][b][ ][Set ID][ ][Data][Cr]
```

Data 00: Channel Delete    Data 01: Channel Add

```
Acknowledgement [b][ ][Set ID][ ][OK/NG][Data][x]
```

## 21. Key (Command: m c)

To send IR remote key code.

```
Transmission [m][c][ ][Set ID][ ][Data][Cr]
```

```
Acknowledgement [c][ ][Set ID][ ][OK/NG][Data][x]
```

Code (Hexa)	Remote control	Code (Hexa)	Remote control
0F	TV	40	^
0B	INPUT	41	v
08	POWER	07	<
79	RATIO	06	>
10-19	Number Key 0-9	44	ENTER
4C	- (Dash)	43	MENU
09	MUTE	45	Q.MENU
02	VOL +	52	SOUND
03	VOL -	4D	PICTURE
00	CH +	5B	RETURN
01	CH -	0A	SAP
1E	FAV	1A	FLASHBK
39	CC		

## 22. Backlight (Command: m g)

To adjust screen backlight.

```
Transmission [m][g][ ][Set ID][ ][Data][Cr]
```

Data Min:00 ~ Max:64 (\*transmit by Hexadecimal code)

\*Refer to 'Real data mapping'. See page 98.

```
Acknowledgement [g][ ][Set ID][ ][OK/NG][Data][x]
```

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Version 2, June 1991

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  - b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of sections 1 and 2 above on a medium customarily used for software interchange; or,

- c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

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When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

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For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

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A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this license; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the library does and what the program that uses the library does.

1. You may copy and distribute verbatim copies of the library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on

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2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of section 1 above, provided that you also meet all of these conditions:
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  - You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
  - You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this license.
  - If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the library, and can be reasonably considered independent and separate works in themselves, then this license, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the library, the distribution of the whole must be on the terms of this license, whose permissions for other licenses extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the library.

In addition, mere aggregation of another work not based on the library with the library (or with a work based on the library) on a volume of a storage or distribution medium does not bring the other work under the scope of this license.

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This option is useful when you wish to copy part of the code of the library into a program that is not a library.

4. You may copy and distribute the library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

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However, linking a “work that uses the library” with the Library creates an executable that is a derivative of the Library (because it contains portions of the library), rather than a “work that uses the library”. The executable is therefore covered by this license. Section 6 states terms for distribution of such executable.

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Whether this is true is especially significant if the work can be linked without the library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessories, and small macros and small inline functions (ten lines or less in length), then the use of

the object file is unrestricted, regardless of whether it is legally a derivative work. (Executable containing this object code plus portions of the library will still fall under Section 6.)

Otherwise, if the work is a derivative of the library, you may distribute the object code for the work under the terms of Section 6. Any executable containing that work also fall under Section 6, whether or not they are linked directly with the library itself.

6. As an exception to the sections above, you may also combine or link a “work that uses the library” with the library to produce a work containing portions of the library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer’s own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the library is used in it and that the Library and its use are covered by this license. You must supply a copy of this license. If the work during execution displays copyright notices, you must include the copyright notice for the library among them, as well as a reference directing the user to the copy of this license. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable “work that uses the Library”, as object code and/or source code, so that the user can modify the library and then relink to produce a modified executable containing the modified library. (It is understood that the user who changes the contents of definitions files in the library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Use a suitable shared library mechanism for linking with the library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user’s computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6, above, for a charge no more than the cost of performing this distribution.
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- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the “work that uses the library” must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

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Version 1.1

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